

THE PSYCHIATRIC QUARTERLY

OFFICIAL SCIENTIFIC ORGAN OF THE NEW YORK STATE
DEPARTMENT OF MENTAL HYGIENE

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Published at the State Hospitals Press,
Utica State Hospital, Utica, N. Y.

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PUBLISHED BY AUTHORITY OF THE
NEW YORK STATE DEPARTMENT OF MENTAL HYGIENE

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The Psychiatric Quarterly, formerly the State Hospital Quarterly, is the official organ of the New York State Department of Mental Hygiene.

Volumes begin with the January number. Annual subscription rate, \$2.00 in U. S. and its possessions; \$2.50 elsewhere.

Editorial communications, books for review and exchange should be addressed to the editor, Dr. Richard H. Hutchings, Utica State Hospital, Utica, N. Y.

Business communications, remittances and subscriptions should be addressed to the State Hospitals Press, Utica, N. Y.

Entered as second-class matter April 17, 1917, at the postoffice at Utica, N. Y., under the Act of March 3, 1897.

*Now absent on military service.

PSYCHOANALYSIS OF PSYCHOSES

I. ERRORS AND HOW TO AVOID THEM*

BY PAUL FEDERN, M. D.

This paper will deal with the schizophrenic and the manic-depressive groups; cases include process-psychoses; stationary cases, temporarily stopped with some defect formation; pre- and post-psychotic states. These groups deserve a denomination with the ending "osis," because mental functions which disappear grossly are not lost potentially, or entirely—each function might become temporarily reestablished.

The metapsychological processes in both groups are: (1) abnormal narcissistic cathexis, diminished object cathexis; (2) ego regression through which (3) onto- and biologically repressed mental elements and aggregates have become conscious; and (4) through which, because of change and diminution in ego-cathexis, the reality test becomes insufficient.

The two groups differ from each other: (1) in the quality of impairment of ego-cathexis (notwithstanding the preceding high narcissistic cathexis, there is in schizophrenics loss of cathexis of ego-boundaries; in manic-depressives the ego-boundaries' cathexis is that of mortido); (2) prevailing ego-states are separately continuing in schizophrenia and alternating in manic-depressives; (3) the morbid process is interrupted by relapses in most schizophrenics and is periodic in manic-depressives; (4) the spontaneous healing process consists in mourning-work in melancholics, in defect-formation and projection in schizophrenics; (5) the main defense mechanisms are regressive or neurotic reactions in schizophrenics but are generalized emotional reactions, spreading over the whole ego, in manic-depressives.

In the beginning, psychoses were psychoanalyzed mainly in consequence of erroneous diagnosis, or with the purpose of using analysis for investigation. Some of the investigated patients seemed to profit by the increased clinical interest given to them. Bleuler himself was the first to state that Burghölzli could discharge three

*This is Part I of a series of three papers by Dr. Federn on the general subject of "Psychoanalysis of Psychoses." Part II, "Transference," and Part III, "The Psychoanalytic Process," will appear in future issues of THE PSYCHIATRIC QUARTERLY.

times more cases since all physicians had begun to deal with them on the more profound basis of Freudian understanding.

Yet these patients were not truly psychoanalyzed. The writer thinks that this was one of the reasons why they improved. The psychiatrists adjusted themselves to the patients and behaved in such a way that they got as much information about the patients' mental aggregates as possible—willingly or without being aware of it, the psychiatrists behaved in such a way that the schizophrenics got good positive transferences to the physicians. Those physicians who failed in this probably soon abandoned the investigation because they did not discover anything new.

When the writer began to psychoanalyze psychoses, all psychoanalysts believed that patients with narcissistic mental disease were unable to establish any transference to the physician. The generally accepted idea was that for this reason no psychoanalysis was possible. Nowadays, many authors know that both statement and conclusion were false. Yet there is some truth in the belief. The transference of psychotics is quite unstable and does not warrant use of the same psychoanalytical method employed with neurotic patients. Since psychoanalysts treated psychoses like neuroses, they had poor results. They had started psychoanalyses when they had not recognized the underlying psychoses. They stopped the analyses when the psychoses had become manifest by themselves or had been made manifest by analyses carried through in the usual way. Some colleagues may remember an interesting staff meeting at which they heard the complaints of a patient who had developed a catatonic state while he was being psychoanalyzed. The patient accused the analyst of having promoted his disease. Yet the analyst had neither interpreted nor encouraged the patient's free association. The analyst had been passive and had listened to the patient's increasing erotic illusionary ideas. He was allowing the patient free outlet and was taking the case history while the psychosis developed.

World War I taught surgeons that patients are harmed by routine sounding or examining of wounds of the lungs, the abdomen, the brain. Similarly, the writer has learned not to take anamneses in psychotic or postpsychotic cases of schizophrenia. I have watched some practically cured cases of schizophrenia for more

than 20 years following the first treatment, and have observed that they refused to remember their psychotic states, having better insight into their pathology than I had. When they were forced to remember them, they relapsed. The patients cured of schizophrenia speak favorably of me, but they do not like to be reminded of their psychoses by meeting me. This is probably the first problem which is neglected in clinics and in private practice. Some genuinely gifted physicians but few thoroughly trained psychiatrists are aware of this fact. The second requisite to psychoanalysis in such cases is that there should be somebody who is interested in the patient and who will take care of him during the analysis and later on. No psychoanalysis of psychotics can be carried through without skillful assistance. The patient should be assisted and protected, he should not be left to himself and his tribulations outside the analytical hours. The helper must have won the patient's positive transference—and the helper may possibly be the mother, sister or brother, rarely the father, and, according to the writer's experience, even less so the wife or husband. When no close relatives are sufficiently loving to devote themselves for some time to the task, a friend is necessary. Without such a harbor for libidinous relief, psychoses are not cured or an accomplished cure does not persist, either when attained by pharmacologic shock, by psychoanalytical treatment, or by a combination of both.

It is not at all astonishing that most psychotics relapse at home or elsewhere when left without the continuous support of transference. Every psychosis is consciously or unconsciously focusing on conflicts or frustrations in family life. Unless these conditions are changed, the cure of psychotics turns out to have been Sisyphean labor which ends in hospitalization or foster-family life. It is true that the sacrifice imposed on healthy or half-healthy family members cannot always be combined with their duties and their claims for leisure and enjoyment. Often consideration for other family members requires more attention than the care of a postpsychotic member, yet this care becomes gradually easier; and many postpsychotic patients return to usefulness and happiness. This mental hygiene work when well organized will prove as effective and economical as preventive care of tuberculosis. Fire and electricity are helpful and dangerous powers, like the libido; yet they may be

so well controlled that they can be handled by everyone in everyday life.

One of the most difficult problems in the psychoanalysis of severe cases of psychosis is the sexual problem. When a manic phase begins to develop in women, they are eager for intercourse, quick marriage and childbirth. In manic phases, men and women always think that they love and are loved; and with their optimism, their productivity, and their overleaping of resistances, they reach response quite easily and this quickly culminates in married or unmarried relationship. Men and women in manic states frequently are so unable to stand any interference with their sexual desires that they return to masturbation. Masturbation is the usual means of temporary self-consolation in middle-grade melancholias. In young hebephrenics, unrestrained masturbation occurs.

The writer's experience has taught him that all psychotics have more chances to recover when they have moderate sexual intercourse. They are adversely influenced when, by abundant sexual activities, the source of the libido cathexis becomes temporarily exhausted; it is then that melancholic and schizophrenic periods become graver and last longer. When treatment is successful, sexual satisfaction can be influenced and regulated to some extent. Psychotic individuals are neither good parents, nor do they themselves readily tolerate the unconscious reversal of the Oedipus situation in parenthood. For these reasons and for reasons of heredity, sterilization by vasectomy or tubectomy is indicated. Yet, in men, these operations are complicated by a bad mental effect insofar as unconsciously they mean castration; X-ray sterilization would be preferable if an unspectacular apparatus was available. In Austria, although these operations were illegal, I had them carried out with the support of Wagner-Jauregg who fully agreed with my opinion that in young schizophrenics vasectomy has a curative effect. We disagreed in that he saw the explanation only in the diminished masturbation; I am convinced that the increase of libido supply through the Steinach effect has a direct influence on the narcissistic ego-cathexis which in these cases has become defective. Sterilized patients of both groups instinctively curtail their indulgence in sexuality when they are cured—this is another argument in support of my explanation.

The writer repeats the general conditions which should be considered in every psychoanalytical treatment: establishment of positive transference; treatment to be interrupted when transference becomes negative; provision of the feminine helper; lasting psychoanalytical postpsychotic mental help and supervision; settling of the sexual problem. These general rules are not just instructions which, when followed, facilitate the psychoanalysis of a patient. They are, as the writer has said, conditions for the treatment. In severe cases, they are indispensable; in milder cases they shorten the treatment.

Milder cases frequently provide themselves with the necessary help, the ego is able to resist full regression in schizoid cases and libidinous exhaustion in depressive cases. In these milder cases, it is sometimes possible to cure the neurosis without provoking the outbreak of the underlying psychosis. Such success is rather to be expected when the treatment is made by pseudopschoanalysis which has abandoned the strict Freudian rules and has compromised with Stekel, Adler, Rank, or Horney. Since many "personality neuroses," called psychopathic or degenerate, are mixtures of different neuroses, of schizoid or depressive dispositions, and of psychoses, the results of such scientifically bad methods are particularly good, and sometimes even better than the response to true Freudian psychoanalysis. The aim, however, is not to bring about help blindly, but to know how to treat mild and severe cases of psychosis with a foundation of sound theory. Neither the true Freudian technique which Freud developed for neurotic diseases, nor the pseudoanalytical measures just mentioned are adapted to severe cases. With justifiable modifications of the technique, good results have been obtained by many of us.

The writer's work dates back to the first decade of the century. It was in Vienna that I became deeply interested in a family of which the mother was a high-strung sadist, whom Ferri would have designated as a "degenerate mother." She suffered from severe asthma. The father died in consequence of an accident which, seen psychoanalytically, can be described as suicide. There were two sons and two daughters in the family. At the age of 18, the younger daughter committed suicide on Christmas Eve when she was expected to leave on a visit to friends. The thought of having

no Christmas holiday in her parental home might have precipitated her decision. The older daughter had at this period been readmitted to the hospital where at 12 years of age she had been diagnosed as having hysteria. Still later, she had been there twice for many months in an agitated catatonic state. I visited her for six weeks and eventually won her transference by kindness, telling her pleasant stories of persons she liked, not mentioning those whom she disliked. I was well informed in regard to all her peculiarities. I did not omit chocolate, and promised to get her out of the hospital. One easily wins a good transference of psychotics by using their regression to the oral level.

My wife was willing to make any sacrifice for an important task; and as soon as it was possible, we took the patient into our home. We tolerated her emotional outbreaks, refusal of food when she feared poison, endless walking in her room during the nights, excessive smoking, recounting of her hallucinatory woes. She was unrestricted, although we knew this meant risking her suicide.

I knew her past and the underlying conflicts, and helped her to overcome them. In the course of the next two years, she came to our shelter for shorter and shorter periods. I did not allow her to return home to her family. I succeeded to some extent in influencing her abnormal mother and her kind but neurotic brothers, and induced them to permit her to live by herself. She continued her studies and became quite a good artist. I asked the teachers in the Art Academy to call me and no other psychiatrist when she became "queer" and paranoid at school. Sometimes she did not need the actual surroundings of our home but would drive with my wife for hours in a carriage, interrupting the ride many times to take unlimited quantities of whatever sweets she was greedy to have. She was appeased and would then return to her own studio. She became normal, married twice, and fulfilled all her duties. She severed all contact with us, which I resented then. There was no question of any payment, but I thought that such services deserved some devotion and gratitude. Later I abandoned this narcissistic standpoint when I realized that such desertion was right and necessary to avoid the fear of relapsing because of being reminded of her psychotic state. Transference and psychoanalytical help com-

bined saved this humanly, intellectually, and artistically remarkable individual.

Later, humble, mediocre, and prominent individuals were among my patients. Every psychotic who is not feeble-minded has enough intelligence to grasp and to accept the explanation of his own mechanisms. His mental disease brings him nearer to intuition and understanding, while normal persons, laymen and psychiatrists, have much greater resistances because of their logical, emotional, and ego components.

A brief report on the course of my first cases will demonstrate the dangers of psychoanalysis when the diagnosis of psychosis is not made in time. The tragedy is that it is the improvement that leads to the optimism of psychiatrist and patient. Sudden decisions are made by the latter, and too early discharges are made by the former. Today, I know that practically no psychotic case should be dropped from analytical care after analysis on the basis of positive transference. For a long time, it has been my policy to recognize no success and to publish no account of any case until five years have elapsed following psychoanalysis.

My first unfortunate psychotic case through which I learned a good deal was the first of all my analytical cases. At that time no control was made officially, but I had the privilege of consulting Professor Freud whenever I needed his advice. Freud had recommended me as family doctor to a patient whom he had psychoanalyzed for hysterio-epileptic attacks. He suspected the traumatic influence of these attacks on the children in infancy, for although the mother had tried to protect them, no sufficient separation of parents and children was accomplished. The daughter was beautiful and extremely gifted. Aided by her father's wealth, she was one of the "glamour girls" in Viennese society. She concealed her hysterical moods and symptoms so that no one suspected the underlying psychosis. Apparently by sexual and erotic adjustment through psychoanalysis, but actually because she had reached a peak of her cyclothymia, she fell in love with a healthy, wealthy, young man, who was charmed by her beauty and her vivacious, witty conversation (in reality, submanic). He showed his matter-of-fact attitude two years later when he divorced her after the first openly manic phase. This marriage would never have occurred if

the true diagnosis had been made in time. Even before the wedding, the girl was disappointed by the ebbing of the tide of her feelings for the man. I opposed the marriage, but her mother and I left the decision to her. She had a sincere talk with the young man, and they decided to marry.

Her life turned out to be a continuous struggle with her cycles. She was treated by different psychiatrists but always returned to me, by whom she felt understood and helped a little more than by the others. In later years she did not need hospitalization but she was unable to achieve anything in life as one phase of her cycles destroyed what the other had built up.

I fully agreed with her reproach that in such cases no psychoanalytical treatment should have been attempted at all unless it had been planned initially to continue for many, many years. Some of her physicians had led her to use drugs indiscriminately. Every analyst knows that patients must learn to avoid drugs during analysis; no patient may be considered cured if he returns to habitual use of drugs after analysis. Yet we cannot stop drug habits in patients who are not cured. Drug habits prove that no sufficient ego restoration has been achieved.

A similar case began with neurasthenia with some phobias and obsessions and ended with drug addiction and manic-depressive states. This patient was the talented youngest son of a highly gifted father famous as "maker and shaker" of European finance. The son was a composer, scientist, business man and writer, yet his successes were limited. The children had the same degree of vigor of instincts and drives as the father; but while in him it was invested in object libido, most of the children were abnormally narcissistic. This narcissism should have made us suspect earlier the underlying psychosis. As in most psychotic cases the first reaction to psychoanalysis was very good. The son worked, got his degree, wrote his thesis. By identification with me, he wanted to marry; and he was accepted by a girl who had previously rejected him. He reproached me all his life that I had not warned him against marriage, and he was right. His wife had no reason to reproach me because I advised her to find her own love satisfaction elsewhere and eventually to divorce him. She did not follow my advice but always appreciated my sincerity. Because some of his phobias still

persisted, I recommended him to Freud. There was no therapeutic success after two years. Freud told me that he suspected a paranoia to be the cause of the rigidity of the resistances, and that—although without success in regard to the neurosis—he may have protected him from the outbreak of his paranoia. This point of view was very suggestive to me.

No problem is harder to judge than the value of methods of prophylaxis in chronic diseases. Statistics give no answer when the differences in social and familial conditions interfere with the required constancy of "*ceteris paribus*." Only by understanding the intricate mental mechanisms and the organic conditions by which specific mental disturbances start and pass through different phases can we make observations and become reasonably sure of blocking one pathway of mental illness without opening another.

In the case in question, obsessions, fears, and eccentricities were improved or cured. This patient retained some rigidity in repeating the same patterns of discussion and the same problems, disregarding the lack of interest of his audience. He excused such lapses as due to the effect of drugs. Drug addiction increased during every depressed period and was never overcome during his elations. The degree of depressive and manic periods remained the same. The drug, by appeasing the amount of pain, counteracts the self-curing effect of each single depressed phase. This patient was psychoanalyzed before he became openly manic-depressive. In the beginning of the depressed phases, he experimented with other treatments and always thought each one excellent, when, with the manic phase, his optimism returned. But with every new cycle, the new method recently praised so highly was deserted. Through all cycles, he retained his adherence to Wagner-Jauregg because he was never influenced by the patient's "ups and down." The only man who stopped his fears and his drug-taking was Groddeck. The transference to me never ceased, even though it was mixed as it was with narcissistic and sadistic satisfaction gained by blaming me for the insufficiency of psychoanalysis. I had to accept this blame. Psychiatrists avoid it by asserting that they do not expect to cure such cases. Because the psychoanalytic method is efficient in many cases, we are expected to help all.

Since I wanted to know more about the relationships between neurosis and psychosis I did not mind taking apparently incurable cases. I came to know the conditions which make incurable cases curable.

In both of the cases discussed, psychoanalysis was directed at the neurosis without awareness of the psychosis. The course might have been the same without psychoanalysis. The writer had the impression that in both cases psychoanalysis had fostered the onset of depression and of manic outbursts. The writer might have seen then (actually he realized it much later) how free association encouraged manic flight of thoughts and how recollection of past periods of life led to short depressions by making guilt feelings conscious. I did not at that time understand that these were hints of the threatening depression.

That we precipitate short and slight psychotic states by psychoanalytic procedure is of itself not necessarily to our ultimate disadvantage in our long combat with the unconscious. Today, the writer uses these slight outbreaks of the psychotic mechanism as indicators of deeper causes to be overcome, especially guilt feelings. But for such tactical victories, one must use the strategy of immediate interruption of further free association. In my first cases I rather enjoyed the abundant production of unconscious material and fostered it, disregarding the fact that the emotional reactions were of psychotic significance in that *the whole and not a part of the ego* was filled by a sudden and inadequate investment of libido in the manic, and of mortido in the depressive reactions. When one applies the usual method, disregarding manic or depressive reactions, these seem to increase so that the latent psychosis becomes manifest.

Psychiatrists who disapprove of psychoanalysis never fail to point out those cases in which psychoanalysis, far from having been helpful, created disasters. This statement is both true and false. A series of events does not necessarily represent cause and effect. Many prepsychotic patients come to the psychoanalyst only when they already feel within themselves some uncanny menace of the threatening psychosis. The psychosis would have caught them anyhow, with or without psychoanalysis. This observation allows us to reconcile Freud's opinion that psychoanalysis protected my pa-

tient from paranoia with the experience that psychoanalysis precipitates psychoses. When the ego is still sufficiently resistant, psychoanalysis can make conscious so many homosexual, sadistic and masochistic trends that the forces of the repressed urges become diminished, so that, in spite of the preexistent paranoid, schizophrenic, or manic-depressive fixation and the failure in ego-structure, the psychotic state is never reached. On the other hand, when psychosis is near the threshold, psychoanalysis breaks down some ego-structures and manifest psychosis results.

The writer thinks that all analysts know today that neuroses and psychoses are, as Freud discovered, the mixed results of the undermining morbid process and of defense mechanisms, with compromises, compensations, reconstructions and symptoms of healing. Different diseases correspond to different mental "topicity" (Freud) of these mechanisms. The writer demonstrated a new model of topical difference in his last paper regarding the distinction between hysteria and obsession.¹ Topically different disturbances do not exclude each other; but one defense mechanism frequently makes all others superfluous. When, with the progress of life through accumulated conflicts and frustrations, the established set of defense mechanisms, e. g., the hysterical or obsessional, is invalidated, then another deeper mental disorder develops. With its characteristic defenses, compensations, compromises and reconstructions, the psychosis is born.

Patients do not die of hysteria. The present writer has watched many terminal states of hysteria in old age and has seen three different endings of this neurosis: Sublimation is the best; a form of narcissistic organ-disease is the most frequent; and the third ending is long-lasting severe climacteric or presenile melancholia from which the patients recover, having lost all or most of the hysterical symptoms.

When melancholia is the termination of hysteria, one may easily understand that this end can be precipitated by psychoanalysis. The writer has the impression that melancholias precipitated by psychoanalysis are less severe than those which occur in the natural course of neurotic struggles. Yet because quite a few hysterics end after the menopause without psychosis, psychoanalysts

must learn not to provoke latent psychoses, and even more to prevent any psychosis from being the terminal state of a neurosis. That is possible when families and physicians cooperate. One may say that adult psychoanalytic therapy should be prophylaxis for the aged, just as education of the child should be prophylaxis for the adult.

In the writer's preliminary paper in 1933, "Psychoanalysis of Psychoses,"¹² he discussed the topic of early diagnosis. Today it would be necessary to comment on many contributions to the problem of psychosis in children. I estimate Melanie Klein's work in this field to be fundamental although I am far from approving all of her interpretations and theoretical comments. These investigations must be tested by the adult lives of those individuals psychoanalyzed in childhood—as the psychoanalysis of "Little Hans" was tested later by Freud.

One more of my early experiences will be briefly reported. In 1912, a 20-year-old student of modern language was sent to me by Professor Freud. She was a pretty and clever girl, handicapped in all her activities by her obsessional state. Her neurosis was intensified after an unhappy love affair two years earlier. Her father was a strict and honest school teacher with no understanding of the hysteria of his wife, who had divorced him, or of the neurosis of his daughter. His only son had developed into an extremely narcissistic man whose intellect was so great that he achieved a position as a judge in spite of his maladjustments. By both brother and father, the girl was neglected and exploited. Psychoanalysis proceeded with "too little" resistance. The girl lost most of her compulsions too quickly. I had to leave Vienna in 1914 for New York and left her able to continue her studies. When I came home four months later, she received me with pride and shyness in her eyes and confided to me that she was loved by a great actor and that Friedrich Nietzsche's voice had spoken to her.

I continued psychoanalysis. Two years later her father died; and four years later the patient committed suicide, unable to study. She never needed hospitalization. I gave the report on the case in the Viennese Society. Freud approved my explanations of the development of her dementia paranoides as a legitimate continuation of psychoanalytic research work.

There were other cases which I began to psychoanalyze with a false diagnosis. Today, I might temporarily make an error in the opposite direction, suspiciously looking for signs and hints of underlying psychosis. Since all these processes manifest themselves dynamically, topically and economically (in Freud's terminology) and not statically, early diagnosis in undeveloped cases lacks certainty.

In latent psychoses, we do not want to achieve complete analysis, proof of which would be the dissolution of transference and identification. When Freud advised trial-psychoanalysis, his main object was the possibility of early discharge of cases which proved or threatened to be psychotic. However, it is very important to spot the latent psychosis as soon as possible. By such early recognition of the psychosis, our therapeutic and analytical aims and methods are changed.

Hidden schizophrenia is indicated during analysis by:

(1) The patient's intuitive acceptance and translation of symbols and the understanding of his primary processes without resistance.

(2) Quick and even sudden disappearance of severe neurotic symptoms; yet, fortunately, as mentioned before, some schizophrenic cases resist dissolution of the superficial neurosis.

(3) A history with periods of very different kinds of neurosis, such as neurasthenia, psychasthenia, hypochondria, early conversion hysteria, anxiety hysteria and obsessions, and severe depersonalizations.

(4) Psychotic periods of true delusions and loss of reality-testing in early childhood. When one hears of such phases during the trial-psychoanalysis, it is evident that the patient is in an intra- or postpsychotic state.

(5) Lasting deterioration in work and isolation in social contacts after puberty or after leaving the regulated life at home or in school. Neurotics, on the contrary, tend to improve for some time when external conditions are changed to greater freedom, or when a new biological period is reached.

(6) Absolute prevalence of the narcissistic reaction pattern over that of object libido.

(7) Typical physiognomic signs in posture, looks, and gestures.

Latent melancholia is indicated in hysteria and in obsessions:

(1) By states of depression occurring every morning; typically the patient frees himself by the help of wishfulfilling fantasies or sexual enjoyment. When, with advancing age, such pain-pleasure economy becomes more and more unsuccessful because reality annihilates the premises of the main fantasy, melancholia develops.

(2) By a reaction pattern by which mental pain is spread over the whole ego.

(3) By early periodicity. This starts as a biological abnormality and broadens and deepens from lustrum to lustrum by mourning work for mental causes.

Mania is sometimes initially indicated by an early defense mechanism exhibiting itself for hours or days in a witty, narcissistic and aggressive behavior without real humor, and contrasted to a general low level of mood and many guilt and inferiority feelings.

The narcissistic ego-cathexis perseveres in untreated or unsuccessfully treated cases from the prepsychotic period through melancholia and mania, over neutral intervals on to the postpsychotic evening of life.

The present writer has compared the excellent results in the case of the painter whose life, and what is more, whose fate was saved, so that she could help herself and other people, with the three others who continued living miserably and making their near ones miserable too. Her psychosis was more severe than the others; and external conditions were by no means better in her case; but her personality was exceptionally interesting, and her kindness could be felt even through her narcissistic rages. I protected her in all her difficulties as if I were her guardian. The distance of psychoanalyst and analysand remained the pattern of our relationship, but her transference was more important to me than the progress of analysis. Analytical hours were irregularly interposed when she was willing. In the three cases with bad results, psychoanalysis of the neuroses was the leading goal. In all cases which I treated later with good results, I followed the rules dictated by the libidinous

condition of the psychosis, and not those dictated by the claim for analytical thoroughness.

Subsequently, I became eager to take over those patients whose psychoses had been precipitated by the psychoanalysis of another analyst, though I myself had learned to avoid such awakening of a psychosis still asleep. Patients were sent to me by former patients and by Freud. Some of them, I took out of sanatoria and installed under the care of male or female nurses in their homes or foster-homes, and then began my work. In all these cases, unfavorable prognoses had been made by competent psychiatrists; and my results were frequently hampered by the interference of psychiatrists who did not share my viewpoint. Later, there were young physicians at my disposal who followed my lines.

No patient can be cured unless his family wishes it, even less in the presence of the family's unconscious or conscious hatred. No physician can cure any severe case when bed, rest, and care are lacking, or when, intentionally or not, antagonisms develop to the task of bringing back the psychotic ego to normality and reality. Experience must be drawn and conclusions made from patients treated under the best conditions and with the least opposition.

Initially, I lacked knowledge, even when the conditions were good, but as time went on I learned a good deal, and in the last three years of my work in Vienna I won an ideal helper, the Swiss nurse-psychoanalyst, Gertrud Schwing.* During and after her training analysis with me she learned psychoanalytic treatment of psychoses. She published our experiences in a booklet, "*Ein Weg zur Seele des Geisteskranken*."¹³ I say *our* experiences since her proceedings were advised and controlled by me. Yet her book contains her own original contributions. Gertrud Schwing worked in Vienna at the Clinic of Pötzl and with psychotics privately analyzed by me.

Pötzl had a friendly attitude toward psychoanalysis, modified by some ambivalence. In discussions, in lectures on the occasion of Freud's 80th birthday, and in articles, he praised psychoanalysis as a science, and Freud as a genius; some of his favored assistants were psychoanalysts and members of our society. But he himself

*At the time I was in a position to convince the Viennese and Swiss groups to agree to her becoming a psychoanalyst, although she had no license or degree, except the "highest degree" of talent for, experience in, and devotion to her work.

dropped his membership. In his excellent clinical lectures he taught more psychoanalysis than any other university professor with the exception of a few in the United States and Japan. He advised psychoanalysis, but with the casual suggestion that a five-months treatment would suffice, even though there was an extremely severe obsession. No wonder that a patient twice changed analysts after five months. Once on the request of the patient's family, he was consulted by me for a case of paranoia. He told them how happy they should be to have the case under my care, but at the same time he remarked that the case was incurable. Unfortunately for his prophecy, the patient was cured. Pötl never did believe that psychoses were a field for psychoanalytic therapy. So much the more does he deserve our thanks for his assistance.

When I asked Pötl to accept Gertrud Schwing as a guest-nurse to study psychoses in his clinic, he consented immediately. The good results of her work were so manifest that she was asked by Sakel to take care of his insulin cases.

The writer has formed the theory that when in shock therapy a more than passing success is reached, it is due to the mental impression made by the treatment, or even by the maltreatment, and to the established amnesia. The patients awaken in a nauseous helplessness to some very infantile ego state. Dr. Piers in Elgin has published a paper about the oral level of patients in such cases. Whether they remain in this or proceed to their normal adult states is a question which can be influenced by the mental approach. In Switzerland, the results with insulin were far better in certain institutions than in all others, because, in the successful institutions, mental treatment by trained nurses was established and because the nursing staff was adequate, with one nurse for three patients.

Metapsychologically the primary schizophrenic process appears to be a functional deficiency or even exhaustion of ego-cathexis; secondarily, it is used as a defense mechanism. Solving outer and inner conflicts, fortifying the ego by protection, transference, identification, and, last but not least, insight into the patients' terrors and inner turmoils are means which Gertrud Schwing used. Better results were achieved by this method, and we learned to know how and why improvement could be expected in some cases but not in others.

For treatment and prophylaxis, many more psychiatrists are needed as well as many more psychoanalytically trained nurses, attendants, and social workers. There will come a time when the American Medical Association and the psychiatric and psychoanalytic associations will themselves promote this instruction. The wisdom of Freud in regard to lay analysis is still outstanding. I would like to see nurses trained in and through all psychoanalytic societies, or at least with their help. We cannot wait for exceptions like Gertrud Schwing among nurses, or Anna Freud among pedagogues, for thousands of such helpers are needed to fight widespread psychosis. Laws and bylaws of any group of men are temporary human artefacts compared with the laws and regulations lying in the reality of nature. The former should be changed when they prove discordant with the latter. Whoever wants to see the number of hospitalized mental cases reduced must improve and increase the staffs of physicians, nurses, social workers, and pedagogues well trained in psychoanalysis.

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PRELIMINARY CURARIZATION IN ELECTRIC CONVULSIVE SHOCK THERAPY*

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The introduction of convulsive shock therapy by Meduna¹ in 1935 was not merely the addition of another treatment method in psychiatry; for the implications and possibilities of the discovery carry far beyond this. At the present time, however, most workers are concerned with the development of the clinical application of the treatment. The best technic to be followed in the use of convulsive shock has not as yet been standardized and there is incomplete agreement on several aspects. This is a report of the writers' experiences to date with one modification of electric shock therapy: the use of preliminary curarization.

Meduna² as early as 1936 recognized the need for future efforts to modify the convulsion or to eliminate it with some more specific measure. Since the introduction of electric shock, it appears even more certain that the beneficial factors are contained within the grand mal seizure, however induced. That the accompanying muscular contractions play no beneficial rôle had been demonstrated by Bennett when he introduced the use of curare with metrazol. Since the muscular violence of the treatment is unnecessary, undesirable and dangerous, it should be eliminated in as far as possible. It is apparent that any treatment procedure of which the grand mal seizure is an integral part will always involve traumatic hazards. Fractures and dislocations occur in idiopathic epilepsy^{3,4} and are of much greater incidence and severity in seizures induced by present methods. The subconvulsive technic, while minimizing the muscular contractions and thereby the skeletal and visceral trauma, does not offer a solution, because the beneficial effects which follow a series of grand mal seizures are not present. It remains that one of the outstanding problems in convulsive shock therapy was and still is the factor of trauma.

*Presented before the Illinois Psychiatric Society, Chicago, December 4, 1941.

†Since this paper was written, both Drs. Cash and Hoekstra have been called into active military service, Dr. Cash as a captain and Dr. Hoekstra as a first lieutenant in the medical corps of the United States Army. THE QUARTERLY is not informed as to their present stations.

During preliminary experiences with metrazol no mention was made of traumatic complications. In a followup report, Meduna² stated that there were no serious complications. Kennedy,³ in reviewing results in the treatment of 1,000 patients, did not mention fractures. Meduna and Friedman⁶ reported on mechanical complications in 1939 without mention of vertebral fractures. In the same year, however, Polatin, Friedman, Harris and Horowitz⁷ reported a 43.1 per cent incidence of vertebral fractures in 51 patients with an average age of 28.7. Later, the reported incidence of serious complications in the form of extremity and vertebral fractures became so alarming that the treatment was abandoned in some institutions and heartily condemned by many psychiatrists as "inhumane." Serious traumatic complications became so frequent as to make it appear that the treatment would necessarily die a natural death in spite of the surprisingly good results obtained in the psychoses, particularly the depressions. The excellent results in the mid-life and old age depressions first reported by Bennett⁸ were probably most instrumental in keeping the treatment alive. In the *Med. J. Aust.* 2:430, 1939, the following statement appears, "Cardiazol is the Elixir of Life to a hitherto doomed race . . . a fracture is a small price to pay for such benefit." While this attitude undoubtedly found many sympathizers, the traumatic complications still strongly condemned the treatment and had greatly restricted the usefulness of the treatment in its original form.

In January, 1940, Bennett⁹ first reported a new modification of the procedure which had safely eliminated the undesirable complications. This he developed after experience with restraint and hyperextension, preliminary insulin coma, spinal anesthesia,¹⁰ preliminary upbuilding with calcium, viosterol, etc., had proved unsatisfactory. Other convulsant drugs were found to carry the same hazards; and nitrogen inhalation had failed as an effective therapeutic method. By this time the problem had evolved into one of softening the muscular violence of the grand mal seizure if the effectiveness of the treatment was to be retained and the complications eliminated. For this purpose a safe, well-standardized preparation of curare was finally obtained through the efforts of Dr. A. R. McIntyre of the University of Nebraska and H. A. Holaday of E. R. Squibb and Sons, research department. In 1941, Bennett¹¹

reported in detail on the clinical safety and effectiveness of curare in convulsive therapy. By the use of preliminary curarization, the muscular contractions were markedly softened with the elimination of all serious traumatic complications, and the number of recoveries in 74 cases was comparable to that in a previous series of patients treated with metrazol alone. At no time, was there evidence to suggest any vague toxic effects from the use of curare. In clinical doses, its action proved to be restricted to the myoneural junction as a direct antagonist to acetylcholine, producing a partial block of motor impulses. In the laboratory, deaths in animals only occurred from asphyxia as the result of intercostal paralysis. One hundred times the so-called lethal dose has been given with no animal deaths as long as respiration is maintained.

In practice, respiratory depression is never a serious problem because the drug is well standardized and there is a wide margin of safety. Also, prostigmine acts as a specific antidote. The only exceptions may be rare cases, with unusual sensitivity to curare. Such an exception has occurred only once in the writers' private series of over 275 patients treated with curare. In this instance, it was apparent within 60 seconds that the patient had received an overdose. Artificial respiration was instituted, and prostigmine was given intravenously. The patient made a prompt recovery without any ill effects. Later, a markedly reduced dose produced the desired effect without respiratory embarrassment. Such patients may be potential cases of myasthenia gravis. It is interesting in this regard to note that in his following articles, Bennett^{11, 12} compared the effects of the drug to the picture of myasthenia gravis. Since these observations, the writers have demonstrated in patients with myasthenia gravis that a small fraction (one-tenth) of the usual dose of curare, one that would be totally without effect in the normal individual, produces a marked aggravation of all myasthenic symptoms. This supports the contention that myasthenia gravis is a form of chronic curare-like intoxication.

Attempts have been made to block motor impulses by the use of other drugs. Bennett^{11, 13} reported that quinine methochloride was a satisfactory substitute except for several disadvantages. The volume of the drug for each dose was about 25 to 35 cc. Also, there was a rather consistent drop in blood pressure and definite

respiratory depression. Rosen et al.¹⁴ reported on the use of beta erythroidine hydrochloride. This drug had certain undesirable systemic effects, together with sometimes severe postconvulsive respiratory depression and prolonged postconvulsive confusion. Yaskin¹⁵ reported on the use of magnesium sulfate. Here again, the volume of the drug was large, between 25 and 30 cc. The injection was accompanied by certain unpleasant systemic effects such as a marked sensation of heat with flushing of the face and neck and diaphoresis. The antidote prescribed was 10 per cent calcium chloride. Although any of these drugs could be substituted, curare has been shown to be specific in its action. It is nontoxic with no side effects, is available in a well-standardized preparation* and requires only about 3 to 5 cc. (60 to 100 mg.) per injection. In addition, there is no question of a central action, as is the case in the use of the other drugs.

The next development in convulsive shock therapy came from Cerletti of Rome, who had studied epilepsy by provoking epileptic fits with electricity in animals. After convulsive shock therapy was introduced by Meduna, Cerletti suggested the use of an electric current for the purpose. With the technical assistance of Bini and after a period of animal experimentation, a method applicable to man was evolved. They¹⁶ reported a small number of cases and maintained that results equally as good as with metrazol were obtained without many of the untoward effects. This method rapidly gained favor in Italy and soon after in England, Holland and the United States. During the past two years it has been rapidly accepted by the profession and is continuing to replace metrazol shock therapy in a larger number of institutions. The reports indicate that the results are comparable to those obtained with metrazol.

It is claimed for this method that the percentage and severity of traumatic incidents are markedly reduced; that, also of paramount importance, the fear of treatment is abolished because of instantaneous loss of consciousness with a retrograde amnesia for the event; that posttreatment nausea and vomiting and posttreatment excitement states have been reduced to a minimum. It cannot be denied that these advantages exist and in the writers' experience have made electric shock therapy much preferable to other forms

*Intocostrin, E. R. Squibb and Sons.

of convulsive therapy. It is important to note, however, that these claims have not been entirely justified.

Posttreatment nausea remains as a complaint in most cases; but only in the unusual one is it very disturbing to the patient, and vomiting rarely occurs. Posttreatment excitement is rarely observed and then only to a moderate degree. In the writers' experience, fear is still a definite concomitant of treatment. The only fear element eliminated is the aura experienced with a metrazol seizure. For the first three to four treatments, the patient presents only the apprehension expected with any procedure in which he is "put to sleep." After this, however, the patient develops a vague dread of the treatment which resembles in a mild form the fear associated with metrazol. This is rarely of sufficient intensity to interfere with the progress or to destroy rapport; and only the occasional patient needs to be persuaded to take his treatment. Patients often blame the posttreatment period of confusion for their fear. It is at this time when the patient "feels lost," doesn't know his own name, where he is, etc., that he needs the most reassurance. In some instances, constantly repeating to the patient that he has just had a treatment offers a tangible explanation for his state of mind, for which he is later grateful; and this serves to alleviate his fear further. Although fear has not been entirely eliminated, it has been reduced to such a degree that this alone makes the procedure preferable to metrazol. With electric shock, the posttreatment confusion is comparable to that produced by metrazol, but memory seems to be more specifically involved. This memory defect persists four to six weeks after treatment is discontinued. Patients may state, "I can't even remember what I was worrying about," and some go even further to state that they couldn't worry if they had to.

Since the introduction of treatment by electrically induced convulsions in 1938, a rather large number of articles dealing with the subject has appeared in the literature. Nearly all of the authors have dismissed the problem of trauma with the statement that with proper restraint, fractures and dislocations do not occur or are reduced to a negligible minimum. This is one of the main reasons why electric shock has been enthusiastically received. But, in view of past experiences, this attitude is an illogical disregard for one

of the most important aspects of convulsive therapy. Blair,¹⁷ in a discussion of a report of two vertebral fractures by Fleming,¹⁸ stated, "In the early days of cardiazol therapy major complications were considered extremely rare. Such an early record of fractures in electric therapy must put one on one's guard against excessive enthusiasm." That his caution was justified is shown by more recent reports such as that by Gonda¹⁹ in which he describes fractures of both humeri in a woman of 53 following the third induced convulsion. Bingel and Meggendorfer²⁰ fail to see much difference in the incidence of complications with the two methods and report dislocations of the jaw and shoulder and fractures of the humerus and scapula. Smith, Hughes and Hastings²¹ report a compression fracture of a thoracic vertebra and dislocation of the shoulder in a single patient. Hastings,²² more recently in a private communication, reported nine vertebral fractures, two humeral fractures and one fracture of the scapula out of 240 patients treated without curare. He states that so far no fractures have occurred in those patients receiving preliminary curarization. Androp²³ reported three mandibular dislocations and no fractures in 50 cases. In the same article he states, "The possibility of shoulder dislocations and humeral fracture seems greater in electric shock than in other forms of shock treatment because of the tendency of the patient toward arm extension over the head at the start of the seizure." The majority of the fractures so far reported from electric shock, excluding the vertebral fractures, have been of the humerus and scapula. In a personal communication, Ebaugh²⁴ reports one case of multiple vertebral fractures among his first 50 cases treated. Since then, he has routinely employed preliminary curarization. Beck²⁵ reports in a man of 58, a fracture of the humerus occurring with the fourth treatment. He adds that despite adequate restraint "there was such a great deal of muscular contraction that the fracture occurred." He also reported backaches in six cases, two of which had rather severe complaints. Furst and Stouffer,²⁶ in the treatment of 115 cases by electric shock, report compression fracture of the mid-dorsal spine in four cases and fracture of the acetabulum in one case. They state that in five cases complicated by osteoarthritis or previous vertebral fractures curare was successfully used to prevent further injury. W. E. Rahm in a survey of

12 institutions using electric shock therapy reported four spinal fractures and two extremity fractures in 3,663 treatments. No fractures were reported from those clinics where curare was used. In the writers' own experience, they have treated only seven patients without curare. (These patients are not included in the series reported.) Of these, two suffered complications. The first was a 23-year-old female who developed a compression fracture of the eighth dorsal vertebra with the first treatment. The second was a 52-year-old female who suffered a dorsal dislocation of the semilunar bone of the right wrist with the fourth treatment.

In considering trauma incident to electric convulsions, it is of interest to examine the reports issued by the Institute of American Meat Packers in 1930. At that time H. J. Keonig²⁷ reported traumatic complications in experimental work in the electrical stunning of cattle in the slaughter houses. He found that confining the electrodes to the skull reduced the incidence of vertebral fractures and ruptured muscles, but gave no figures. R. W. Regensburger, in the same publication, reported on electrical stunning of hogs. Here again, confinement of electrodes to the head caused less damage to the musculature. They considered the problem of reducing the severity of the convulsion one of great importance. These reports also mentioned increased pulmonary congestion; and a separate communication reported petechial hemorrhages throughout the lungs which grossly were indistinguishable from hemorrhagic septicemic states and so rendered the procedure impractical. At present, experimenters are seeking a method by which to distinguish grossly between the petechial hemorrhages incident to the convulsions and the lesions of disease.

While the incidence of fractures and dislocations in the shock treatment of mental disorders has undoubtedly been reduced by the electrical induction of the convulsion, it is quite evident that they have not been eliminated. Nor is it reasonable to expect that they would be because the convulsive seizure produces muscular contraction of such severity that fractures occur. Moore and Winkelman³ make this statement: "The manner in which vertebral fractures are produced by the metrazol convulsion has been variously described. In brief they are due to the severe muscular contraction of the truncal muscles producing flexion and thus compression frac-

tures of the vertebrae, mainly in the thoracic column." Position plays a part in the production of vertebral fractures, and these may be materially reduced by restraint and hyperextension. These same methods of restraint, on the other hand, have possibly contributed their share in the production of extremity fractures. The electrically induced convulsion has been demonstrated to be sufficiently severe to cause fractures; and with a safe method available to prevent them, the writers believe unmodified electric shock therapy is not justified. Aside from skeletal complications, soft tissue damage must be considered, such as the aggravation of osteoarthritis, production of muscle pain and soreness, possible unnecessary cerebral damage and pulmonary lesions in the form of petechial hemorrhages; all are complications of convulsive shock however induced. The increased incidence of tuberculosis observed by Read²⁸ following unmodified convulsive therapy is also a traumatic complication.

It is significant that of 43 metrazol deaths reported by Kinsey,²⁹ 21 were attributed to pulmonary complications. Of these, 12 were the result of pulmonary tuberculosis activated during treatment. Three deaths resulted from pulmonary infarction. Of the three cerebral deaths, two were due to hemorrhage and edema.

Because the writers believe that the muscular violence of the electrically induced seizure is unnecessarily severe and potentially dangerous, preliminary curarization has been employed routinely with all of their treatments. The technic is identical with that used in curare-metrazol therapy as described by Bennett,¹¹ with one exception. The initial jerk when the current is passed requires a mouth gag, because at this time the patient bites down. No form of restraint is used, and the position of the patient is not corrected by the use of any hyperextension apparatus. This avoids provoking any unnecessary apprehension on the part of the patient, because many can recall all events up to the time of the passage of the current.

The dose of curare is estimated from the body weight of the patient, using 1 mg. for every two pounds of body weight. In patients with a marked recent weight loss, the normal weight is used in the calculation. The requirements may be slightly higher in heavily-muscled individuals and in older men. The optimum time for the

total intravenous injection is 60 seconds. If given too fast, a shock-like reaction may be produced, with a fall in blood pressure and shallow respirations. If given too slowly, the curarization may be incomplete or absent. Two minutes are allowed after the completion of the injection for the desired effect to develop. The first symptom is a haziness of vision, followed in order by a bilateral ptosis, nystagmoid movements, relaxation of the jaws and facial muscles, a sensation of tightness in the throat, and difficulty in swallowing, with huskiness of the voice. These are followed by weakness of neck muscles which makes it difficult or impossible to raise the head. Weakness of the muscles of the trunk and extremities appears last. At this point, the convulsion is induced, with the result that the muscular contractions are markedly modified. In some cases the only gross movement is a flexion of the arms upon the chest. The writers no longer try for a deep curare effect but only enough to protect the patient.

It is necessary to exercise a reasonable amount of caution with the use of curare. After the treatment, the angles of the jaws should be supported; and if there is a great deal of stridor, an airway should be used but is seldom required. By the time the patient has regained consciousness, the curare effect has nearly disappeared. Prostigmine for intravenous injection should always be immediately available.

The use of curare does not influence the period of apnea, nor does it need to retard the appearance of good strong respiratory movement. One patient included in this series was a white female of 32 who had suffered an attack of poliomyelitis at the age of 11. She was left with severe residual marked scoliosis and kyphosis, and marked intercostal muscular paralysis. Preliminary curarization was employed in each of the 11 treatments. Respirations were promptly resumed after the usual period of apnea. The writers have encountered no untoward effects with the use of curare, and, with this protection, they have had no traumatic complications in a total of 139 patients who have received 995 combined curare-electric shock treatments. Up until August 15, 1941, a total of 14,200 vials (100 mg.) of curare had been distributed for use, first with metrazol and now in many clinics with electric shock. This means approximately 18,000 treatments; only one fatality attribut-

able to the curare has been reported. This was the result of failure to take proper precautions. Neither proper artificial respiration nor prostigmine was used.

The contraindications to the treatment have been variously listed. The most definite of these is active pulmonary infection. Acute febrile diseases, severe thyrotoxicosis and thrombophlebitis, all require treatment before convulsive therapy is considered. In the writers' experience, age and arteriosclerosis do not constitute contraindications. The best results in depression are obtained in the older age groups and complications are of no greater incidence than in the younger patients. In cases with electrocardiographic evidence of coronary disease, treatment is not withheld, providing there is no evidence of definite cardiac decompensation. Aggravation of osteoarthritis must always be considered, but with preliminary curarization this is eliminated. Three patients in the present series had marked spinal curvature and were treated with curare electric shock without untoward effects. The routine use of curare reduces the number of contraindications and makes the treatment available to a larger number of patients.

In the writers' experience a minimum of six grand mal seizures is necessary to relieve a resistant depressive psychosis. A schedule of a one-day interval between the first and second treatments, two days between the second and third and three days between the third and fourth, with intervals of three, or four to five days thereafter has been established. It is to be emphasized, however, that hard and fast rules cannot be set, and this system is used as a flexible guide. Treatment by convulsive therapy is as individual as the patient himself; and the psychiatrist has to be guided by his experience and the response of the patient to treatment. The number of treatments and the interval between treatments is a matter of judgment in each individual case and to some extent dependent on the amount of "therapeutic confusion" produced.

A procedure to be condemned is the ambulatory treatment by convulsive shock. While it is admittedly feasible and in part successful, the majority of patients who require shock therapy will not gain maximum benefit unless they are at the same time under strict psychiatric management. Also, there is a certain number in whom treatment at first aggravates the existing psychopathology or may

uncover more deep-seated psychotic trends; and unless the patient is under strict control this may prove disastrous. Here, the writers want to add their emphasis to the fact that convulsive shock in itself is not a specific treatment, but close guidance and frequent interviews are extremely important during and following recovery. This is best accomplished if the patient is hospitalized.

The results obtained in the 139 patients who have received curare electric shock therapy are summarized in the tables.

TABLE 1. AFFECTIVE DISORDERS

Diagnosis	Sex	No. cases	Age	Average shocks	Average hosp. days	Results
Depressions	F	54	29-76	6.6	43	45 (53.5%)—A*
	M	30	Av. 47			36 (42.8%)—B
	Total	84				2 (2.3%)—C 1 death
Depressions:	Results according to age group:					
	Results obtained in those above 70					3 —A 1 —B 0 —C
	Results obtained in those above 60					9 (64.2%)—A 5 (35.7%)—B 0 —C
	Results obtained in those above 50					23 (62.1%)—A 13 (35.1%)—B 1 (2.7%)—C
	Results obtained in those below 50					22 (46.8%)—A 23 (48.9%)—B 1 (2.1%)—C 1 death

*A—Complete remission with full insight.

B—Social remission with some residual symptoms.

C—Unimproved.

Remarks: No attempt was made to classify the results according to the type of depression. Results of the different age groups show 64.2 per cent A results in those above 60 compared to 62.1 per cent A results in those above 50 and 46.8 per cent A results in those below 50.

Eleven patients were treated as outpatients; four of these returned for further treatment after discharge. The remaining seven included the two C results and only two A recoveries.

Included, were four patients who had relapsed from metrazol therapy, and all again made good recoveries.

AFFECTIVE DISORDERS—(Continued)

Diagnosis	Sex	No. cases	Age	Average shocks	Average hosp. days	Results
Manic states:	F	7	21-65	7.7	45.1	2 —A
	M	7	Av. 41			7 —B
	Total	14				5 —C

Remarks: Two of this series were removed from the hospital prematurely and promptly relapsed. They are classed as C results.

One patient, recurrent manic of many years standing, had relapsed from a previous course of metrazol shock and again made a B recovery with 23 days hospitalization.

Only five of these patients could be classed as acute in their first psychotic episode. Of these, two were classed as C and three as B.

The writers believe the results in this small series to be misleading and expect that further experience will show the treatment to be definitely more effective in this disorder.

TABLE 2. SCHIZOPHRENIA AND PSYCHONEUROSES

Diagnosis	Sex	No. cases	Age	Average shocks	Average hosp. days	Results
Schizophrenia	F	12	19-52	11.5	63.4	2 —A
	M	7	Av. 36			9 —B
	Total	19				8 —C

Remarks: One patient treated as an outpatient made an excellent response to each course of treatment but continued to relapse and was eventually institutionalized.

Diagnosis	Sex	No. cases	Age	Average shocks	Average hosp. days	Results
Psychoneuroses:	F	6	24-49	7	37.7	4 —A
	M	5	Av. 34			7 —B
	Total	11				0 —C

Remarks: One outpatient with a rather fixed hysterical reaction returned to his normal activities, although he retained his original symptoms in a modified form.

TABLE 3. CHRONIC ALCOHOLISM AND PSYCHOPATHIC PERSONALITY

Diagnosis	Sex	No. cases	Age	Average shocks	Average hosp. days	Results
Chronic alcoholism:	M	7	25-56	5.5	25.1	0 —A
	Total	7	Av. 40			4 —B
						3 —C

Remarks: Two of the B results have been followed for about a year. Both were seriously handicapped and since treatment have been able to carry on normal activities. The other two have been followed only a few months but so far are much improved with no drinking.

All three of the C results were removed from the hospital prematurely. One promptly relapsed, and the other two have not been followed.

All of these patients were treated because of prominent depressive or anxiety features.

TABLE 3 (—Continued)

Diagnosis	Sex	No. cases	Age	Average shocks	Average hosp. days	Results	
Psychopathic personality:	M	4	25-51	7.2	50	0	—A
						0	—B
	Total	4	Av. 33			4	—C

Remarks: The results in this small series were uniformly disappointing.

Comment on Entire Series:

A total of 139 patients received 995 combined curare electric shock treatments. There were no traumatic complications. One death occurred. Thirteen patients were treated as outpatients.

One death occurred in this series. A white male of 47 had been admitted with a depression of one year duration. The clinical history and laboratory findings were negative for physical diseases. An electrocardiogram had shown no pathologic changes. He had received four curare electric shock treatments and had shown definite improvement. Following his fifth treatment, he appeared to recover in the usual manner and had been out of bed. About two hours following the treatment, he came to the nurse's station with a request and was told to return to bed. He returned to bed and when next visited by the nurse, 10 minutes later, he had died. A complete postmortem examination did not reveal the exact cause of death. There was rather marked sclerosis of the anterior descending branch of the coronary artery with narrowing of the lumen but no involvement of the cardiac musculature. Systematic examination of the brain showed no changes to account for the death of the patient. This was apparently a cardiac death, but the exact mechanism was not pathologically determined.

CONCLUSIONS

1. The treatment of affective disorders particularly the depressions, by the induction of grand mal seizures is an established, highly-effective procedure.
2. The introduction of the electric shock method has been a material improvement over previous methods.
3. Trauma is still an important but neglected factor in convulsive shock therapy, and the traumatic hazards have not been eliminated by the adoption of electric shock.

4. The traumatic complications are not confined to the vertebrae and the long bones; and sufficient attention has not been given to visceral complications in the form of petechial hemorrhages, increased incidence of tuberculosis, etc.

5. The writers believe that a direct, safe and effective means of eliminating trauma incident to convulsive shock therapy is available in curare and that straight, unmodified electric shock is unjustified.

6. Preliminary curarization increases the scope of usefulness of convulsive therapy and makes the treatment available in cases where it might otherwise be contraindicated.

7. Results obtained in 139 cases treated by the combined curare-electric shock method are reported. The best results were seen in the depressions with an increased percentage of complete recoveries in the older age groups.

8. One death incident to electric shock therapy is reported.

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DISSOCIATED PERSONALITY: A CASE REPORT

BY SAMUEL LIPTON, M. D.

Dissociated personalities have been infrequently reported in the literature since Morton Prince¹ described the case he had observed for several years. Because of the rarity of the disorder and because of the wealth of psychological information it offers, it is considered worthwhile to present the present case in detail. The term dissociated, rather than dual or multiple personality, seems more appropriate because in this case, as well as in others reported, there was one primary personality and other secondary ones which were incomplete or showed evidence of regression.^{1, 2, 3, 4, 5, 6, 7}

CASE REPORT

In July, 1941, a young white woman, (Sara K.), was found by the police wandering aimlessly on the street and was brought to the Cincinnati General Hospital. She was identified by a card in her purse which stated that her husband should be called if she had an attack of amnesia. On examination she appeared apprehensive, did not know her name or anything about herself, and did not know where she was, beyond being in a hospital, or where she was going. She was fairly well informed on current events, and her retention seemed only slightly impaired. She was small in stature, was five feet tall and weighed 110 pounds, looked immature, and had a "baby face."

The patient was admitted to the psychiatric service. Physical, neurological, and laboratory examinations were entirely negative. The blood Kahn was negative, and the spinal fluid was normal. Electroencephalograms, done on several occasions, were normal.

The history was obtained from the patient's husband, Albert, a 32-year-old factory worker, and from her parents and sister.

The grandparents were normal as far as is known. Each set had 10 children, and all were living and well, according to Sara's mother.

Sara's father was 62. Fourteen years before, when the patient was 11, he had been committed to a state hospital with a diagnosis of psychosis with somatic disease. (He had had a prostatectomy.) It is probable that he would now be classified as schizophrenic. Be-

fore his commitment he had abused his children, and Sara disliked and feared him. After his discharge, he made a poor work adjustment, doing only odd jobs. He seemed a slovenly, irritable old man with no insight into his own or his children's mental condition.

Sara's mother was 60, living and well. She was an unintelligent and rigid but strong character. She had kept her family together and off relief during the illness of her husband and son by doing factory work as well as keeping house. She was overprotective toward her children and interfered a good deal in their affairs. She had poor insight into the mental illnesses of both her husband and children and cooperated poorly with their doctors. Sara said she loved her mother but could never confide in her and felt she had often used poor judgment in rearing her children.

There were six siblings. A pair of twins was first born. One died in infancy, and the other was run over by an automobile at the age of six.

Stella, 33, was living and well. She was married and had two children. Sara had always resented Stella's "superior attitude" and got along with her poorly.

Godfrey, 27, was living and schizophrenic. He was committed to a state hospital a year before the patient's admission, received insulin shock treatment with little improvement, and, after an unsuccessful trial visit home, was rehospitalized. Sara was very close to Godfrey and was deeply shocked by his commitment. His peculiar, suspicious behavior, ambivalence, and vague manner of speaking had been accepted as normal for years; and only violent and assaultive actions, particularly an attempted sexual attack on the mother, led to hospitalization.

The child before Sara died of some intestinal disorder at six weeks. Sara, 25, was the last sibling.

Sara was a full-term infant, spontaneously delivered, and bottle fed as her siblings were. Walking, talking, and toilet habits were recalled as "normal." She talked in her sleep but showed no other neurotic traits. She was unprepared for, and shocked by, the menarche at 10. Through her adolescence, she fainted a few times a year, although she was never injured and always quickly recovered. Some of her friends thought she was feigning.

Sara's grades in school were above average, and at 17 she was graduated from high school and did office work for a year.

Shortly after her graduation, she met Albert, and a year later they were married. They considered their marriage a happy one though by no means free of difficulty. Their first child was born a year after the marriage. During Sara's pregnancy and afterward, they were almost constantly in serious financial difficulty, and she worked as a domestic as well as doing her own housework. They had a few fairly serious quarrels over finances and some quarrels which Sara attributed to Albert's jealousy.

Sara was in ill health periodically for three years prior to her hospital admission. She had had an appendectomy, a uterine suspension, and a thyroidectomy within a year in 1937 and 1938. In retrospect, it seems probable that symptoms of anxiety preceded the last operation. After she was told that a thyroidectomy was necessary, she had a period of amnesia for a few hours similar to those preceding admission. She attributed it to fear over the neck incision. (The night before Sara's father was committed to the state hospital, he terrified the children by threatening to cut their throats.) Also, during this period, she made a suicide threat which Albert attributed to ill health.

Sara wanted a second child and, five months before admission, bore one. Two months later, she developed a severe sore throat which lasted six weeks. After this, she began to have attacks of amnesia two to three times a week, lasting one to eight hours. She was aware of the lapses because she found herself in strange situations, and she finally consulted a physician, but for several weeks concealed the illness from her husband. The doctor finally informed Albert and advised a rest in the country. Sara went to a farm but, a few days later, wandered away and was next found in Cincinnati.

The day after admission, the patient had partly regained her memory, and after the second day it was normal except for a few hours three to five times a week. During these periods, she seemed extremely frightened, often tried to escape, and answered, "I don't know" to almost all questions. Under hypnosis, she was able to recall most of the events preceding admission. Also, any attack of amnesia could be terminated by hypnosis, and, because of her great, vague fear, this was often done.

Within a few days after admission, she became dizzy. The dizziness was constant, remaining the same when the patient was amnesic and unaffected by hypnosis and suggestion. Also, she complained of a constant generalized headache which likewise was unaffected by suggestion but was absent during her amnesic periods. No "organic" cause for either dizziness or headache could be found.

At this time, it was felt that the patient had hysterical amnesia and that her dizziness and headache were hysterical conversion symptoms; and it was decided that psychotherapy should be attempted. From July until May of the following year daily, hour-long interviews were held. Up until October, the patient was encouraged to discuss her life history, family and marital relationships, dreams, and other relevant material. On several occasions, the hypnotic trance, induced to terminate the distressing amnesic attacks, was utilized to gain access to repressed material. With suggestion, the patient could always recall such material, often more completely, when fully conscious. During this period of about 10 weeks, a tremendous amount of repressed and suppressed traumatic sexual material was uncovered. The patient was deeply shocked and depressed by this to the point of threatening suicide.

The repressed material consisted of an incestuous relationship with the father and brother and sexual promiscuity with other men. The relationship with the brother started with sexual play when Sara was seven or eight; and, after the age of 10, intercourse took place. At first she did not consider it wrong, but, by the time she was 12, felt extreme guilt and insisted on breaking off the relationship. Contact was stopped until 16, but was then resumed and continued intermittently until Godfrey's hospitalization; and Sara considered it possible that her second child was Godfrey's. Her feeling toward him was one of great love and desire mixed with extreme guilt.

About two years after the relationship with Godfrey started, the father began forcing practically every type of perverse sexual practice on the patient and continued for over a year until he was hospitalized. After he was released and returned home, two years later, he forced a resumption of the relationship for an indefinite

period. Sara's reaction was the most intense revulsion, loathing, and fear.

In addition, she recalled, at long intervals, and also with reactions of extreme guilt, a series of promiscuous relationships, starting at the age of 15 and continuing through her marriage. The possibility that the whole story was fantasy was considered. There was no means of confirming or disproving it directly, but Godfrey's history, as given to the doctors of another hospital, particularly the story of the sexual assault on the mother, tends indirectly to indicate that it might well be true.

In mid-September, the patient began to have auditory and visual hallucinations. These consisted chiefly of her brother's voice calling her and talking to her. Also she had terrifying visual hallucinations of her father threatening sexual assault. Godfrey told her that he loved her and she should come with him, that she hated the hospital and the writer and ordered her to destroy the place and chop off the writer's penis, and kill him. She felt impelled to carry out Godfrey's orders, and her behavior therefore became assaultive and destructive. In response to more subtle commands from Godfrey, she would attempt to make her escape by indirect means or by professing insight into her hallucinations. After all such incidents she was able to relate, with much blocking, that they were in response to orders from Godfrey and that, although she knew what she was doing, she was unable to stop herself. Meanwhile, she had become withdrawn, seclusive, blocked a good deal, and ate poorly. Her headache was purposely disregarded by the physicians, and, after a couple of months, she did not complain of it. The amnesic periods had continued with decreasing frequency, were accompanied by less fear, and were absent after early October. (A few times she thought the date was a year or two earlier and related other facts correctly to that time.) After an amnesic period on October 6, the dizziness was gone and never recurred. She had often been told that her dizziness alone made it necessary for her to stay in the hospital, and overcoming it seemed almost in response to Godfrey's order to leave.

It appeared that the defense by the hysterical amnesia and conversion symptoms had broken down, and the patient had become psychotic. The investigative type of psychotherapy was aban-

done, and thereafter psychotherapy consisted chiefly of reassurance and a non-condemning personal relationship.

Also in mid-September, at about the same time that the hallucinations started (it is impossible to state precisely, because the hallucinations were not discovered for several days), the patient began to show a different type of behavior characterized by brief periods of violence and destruction, for which she had no memory. This seemed quite different from her other violent behavior. It was impossible to reason with her, she could be restrained only by force, and often during the struggle or immediately afterward, she seemed to "come to," and would at once stop her violent struggles or would ask why she was restrained. The periods lasted 10 to 30 minutes at first; later, as they became less violent, up to six hours; and they occurred with gradually increasing frequency until they were almost daily by November.

There was no warning of the onslaught. Sara would seem perfectly quiet and cooperative one moment and, in the next, would smash chairs, the piano, windows, dishes, and usually—with a fragment of glass or porcelain—try to slash her wrist. It became necessary to restrict her activities rigidly, in fact, to keep her locked in her room, restrained, or guarded by two persons at all times. In order to explain the restrictions to her, she was told what she had done. She would always deny it and appeared baffled when she realized her wrist was cut or when the wreckage on the ward was shown to her. In discussing this violent behavior with the nurses and the staff, as well as with Sara, one was constantly saying, "Sara changed again," or "Sara had one of her violent spells," or some similar expression. For the sake of convenience in discussion and in making notes, it was decided to call the patient by another name, Maud, when she appeared different. It is to be understood that this was merely for convenience in discussion and narration; and the patient under no circumstances identified herself as any one other than Sara.

A determined effort was made to be kind and considerate to Maud despite her violent behavior. She gradually became more amenable, and, instead of merely raging and struggling, would consent to state furiously that she hated the place, hated the writer, wanted to go, wanted to be left alone. As weeks and months passed

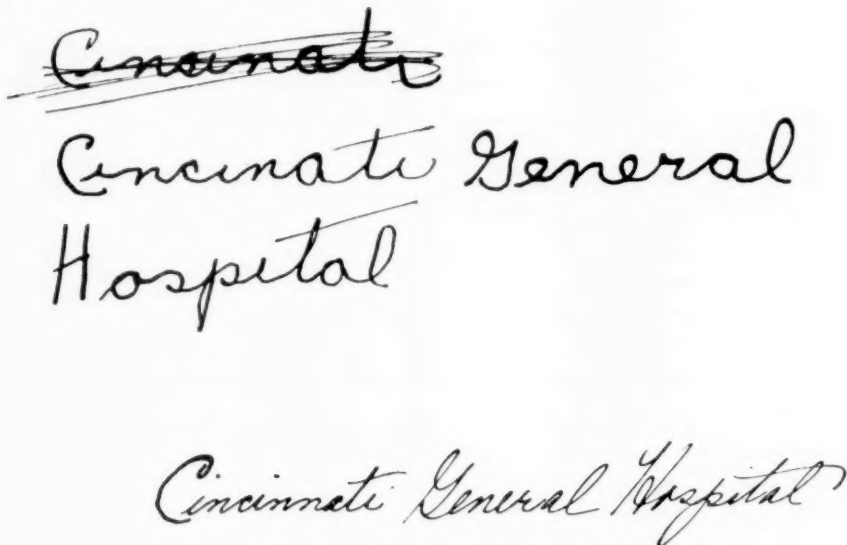
her attitude, toward the writer particularly, slowly changed; and finally, in February, after four months of contact, she admitted she no longer hated him but liked him. Sara was consistently amnesic for the periods when she was Maud. Maud, on the other hand, was always completely amnesic for the time that Sara was present, and had memories only for the few hours each day or two that she herself was present. Maud always insisted that she was Sara and there could not possibly be another Sara. As Maud became cooperative and it was possible to study her closely, she seemed to be a completely different person, and the investigation of the differences between the two, the clues in the past, and the reasons for the change, proved to be fascinating.

First, in general demeanor, Maud was quite different from Sara. She walked with a swinging, bouncing gait contrasted to Sara's sedate one. While Sara was depressed, Maud was ebullient and happy, even though suicidal. Suicide and death meant nothing to Maud, and she saw nothing wrong or depressing in them. When asked why she wanted to commit suicide, she at first would reply only, "Why not?" But later, she admitted that Godfrey had told her to and that they had actually discussed a suicide pact.

Sara stayed in her room all day, talked to no one, and was little inconvenienced by the restrictions on her activities, while Maud was interested in the ward, the personnel, and the patients. She liked to select impudent nicknames for the personnel or use their first names, something Sara would never think of doing. Insofar as she could, Maud dressed differently from Sara. Sara had two pairs of slippers. One was a worn pair of plain gray mules; the other, gaudy, striped, high-heeled, open-toed sandals. Sara always wore the mules. Maud would throw them aside in disgust and don the sandals. Sara used no makeup. Maud used a lot of rouge and lipstick, painted her fingernails and toenails deep red, and put a red ribbon in her hair. She liked red and was quickly attracted by anything of that color. Sara's favorite color was blue.

Sara was a mature, intelligent individual. Her mental age was 19.2 years, I. Q., 128. A psychometric done on Maud showed a mental age of 6.6, I. Q., 43. Sara's vocabulary was larger than Maud's, and she took an intelligent interest in words new to her. When Maud heard a new word, she would laugh and mispronounce it, or

say, "That was a 25-cent one." In sharp contrast to Sara, Maud's grammar was atrocious. A typical statement was, "I didn't do nuttin." Sara's handwriting was much more mature than Maud's. (Fig. 1.)*



The image displays two samples of handwriting. The top sample, written by Maud, shows the word 'Cincinnati' crossed out with multiple diagonal lines. Below it, the words 'Cincinnati General Hospital' are written in a cursive script. The bottom sample, written by Sara, shows the words 'Cincinnati General Hospital' written in a more mature and fluid cursive script.

Fig. 1. Maud's (above) and Sara's handwriting

Sara did not smoke and was very awkward when she attempted it. Maud had a compulsion to smoke. At times she insisted she "had to" and would become agitated and even violent if cigarettes were denied her. She would smoke chain-fashion as many cigarettes as were permitted, but two would satisfy her for a while.

Sara's sensory system was normal, but Maud had no skin sensation except touch. This was first suspected when Maud was found lacerating her wrist with a fragment of a dish without exhibiting a sign of pain. When asked if it did not hurt, she asked what "hurt" meant. She did not know the meaning of "hurt" or "pain" and could not comprehend explanations. She said she had never been hurt, never felt pain, never "felt bad," never cried. She knew that people made a fuss when she cut herself, but she could not understand why. Later in the course of the case, when Sara received insulin shock therapy and suffered a fracture of a thoracic vertebra

*For obvious reasons, pictures of the patient which well illustrate the difference in facial expression between Sara and Maud must be withheld.

during a convulsion, she suffered a good deal of pain, requiring morphine to control it. When she changed to Maud, though, she felt no pain, laughed at the idea that there was anything wrong with her back and insisted on getting out of bed and bouncing around in her characteristic fashion. Trying to keep her in bed involved more trauma to her back than allowing her to get up. (Incidentally, the fracture healed well.) Maud never had a somatic complaint of any kind while Sara had many, headache, sore throat, toothache, dysmenorrhea, and others.

In addition to the anesthesia, Maud could not detect deep pressure, vibration, or heat and cold. She paid no attention to the weather and would open her window wide on the coldest winter day or walk outside with only a hospital gown on. She had no sense of motion, position, weight, or two-point discrimination. With her eyes closed, Maud could not move her arm from one position to another, and she walked unsteadily with great hesitation. Maud had no sense of taste or smell. The lack of a sense of taste was also discovered accidentally during a period when she was eating very poorly. She was asked what food she liked and replied that it was all the same. On testing her with her eyes closed, it was found, for example, that bean soup and milk differed to her only in that the soup was "lumpy." She always tried to conceal her deficiencies. In the case of smell, she had learned that flowers were supposed to have an odor and sometimes would slyly say some flowers "smelled pretty."

Maud had no conscience, no sense of right and wrong. She saw no reason for not always doing as she pleased. She felt no guilt over her incestuous and promiscuous sexual relationships. She loved Godfrey and enjoyed intercourse with him as well as with her father and others. She was not afraid of her father. Sara was repelled by cunnilingus and fellatio except to a certain extent with Godfrey; but Maud enjoyed either with anyone as foreplay. Maud was also sadistic. She liked to spank her child to hear her cry and spanked others in precoital play. Maud was able to recall more details of many of the sexual relationships and remembered having intercourse on some occasions when Sara recalled that there was no intercourse. For example, Sara would state that Godfrey came to her room and caressed her, and that she forced him to leave. De-

scribing the same incident, Maud would say Godfrey came to her room and that they had intercourse. It seemed that Sara changed to Maud at the point when Sara's feeling of guilt was greatest.

Maud gradually developed a code of behavior in compliance with the writer's orders. All she understood was, as she said, "What you say is good, is good, and what you say is bad, is bad," and, in order to please the writer, she tried to be good. It seemed reasonable to her to assume that his interest in preventing destruction was because the ward furniture was his. She found it easier to accept the fact that it was "bad" to smash the writer's glasses, or "his piano," or "his dishes," than to understand why she could not attack a nurse, who perhaps had refused her a cigarette. She felt hurt when members of the personnel referred to her destructive behavior as "mean." "I'm not mean," she would say, "I just do it because I want to."

Godfrey was always "with" Maud. "Godfrey never leaves me." He was "with" her in two ways. Sometimes he was "really here." This meant she had a visual hallucination of him, could touch him and walk with him, swinging hands, or have intercourse with him. Most of the time, though, he was "just here." He could not be seen or touched, but she insisted that he was "here." Godfrey "talked" to Maud a good deal; and much, but not all, of her compulsive, destructive, and suicidal behavior was "ordered" by him. Maud wanted to be liked, but she felt no one liked her except Godfrey and the writer, and she was often in doubt about the writer.

Maud had many compulsions. Her smoking has already been mentioned. Another was that she constantly scratched the inner surface of her left thumb with her left index finger, abrading the skin and sometimes causing bleeding. She was not conscious of the movement and could explain neither it nor the compulsion to smoke. When she was forcibly prevented from carrying out the movement, she immediately became anxious, angry, and struggled to renew it. Under hypnosis, it disappeared. Often, Maud had a compulsion to walk outside the ward. This occurred when Godfrey was "really here." She could not stand still and, if not permitted to go for a walk, would become anxious and make violent efforts to escape. After a walk of 10 minutes or so, Godfrey would again be "just

here," and the compulsion would disappear. Sara said she and Godfrey liked to go on long walks before hospitalization.

Maud feared enclosed spaces. She would never permit the door of her room to be closed, and during the period when rigid restriction of her movement was necessary, she had to be kept tied to her bed by one leg (on a "dog chain," as she quickly dubbed it), rather than kept locked in her room as Sara was. This phobia made it impossible to get an electroencephalogram on Maud because she struggled to get out of the EEG cage. Hypnosis made no difference and once when forcibly held in the cage, Maud changed to Sara. (As stated, Sara's EEG's were normal.) Maud could offer no explanation for her fear, but some suggestive evidence was found. Sara was hypnotized, progressively disoriented for time, and then gradually reoriented to a period in her childhood, in the manner described by Erickson.⁸ When she had regressed to the age of seven, Sara recalled that she had been badly frightened by being accidentally locked in a closet for several hours. Later, Sara was able to recall the incident when fully conscious, but Maud never did remember it; and the whole process had no effect on Maud's claustrophobia. Maud, herself, could not be induced to regress in age under hypnosis because she did not know how old she was and had no concept of time. (She could not even tell time.) When asked how old she was, she would answer that a woman's age was her own secret. Maud could be told she could have a cigarette in a minute, and then be put off for 20 minutes, while being told that only a half or three-quarters of a minute had elapsed.

Both Sara and Maud were excellent subjects for hypnosis. By the method described, Sara was induced to regress to various ages, as far back as one year. The hypnotist was identified either as Godfrey, or, in infancy, as "daddy." Up to two years, Sara was called "baby," and when she regressed to this age she would respond to no name until "baby" was accidentally struck on. At the age of one, when she could no longer walk, Babinski's sign was present. On one occasion, Sara was hypnotized, the suggestion was given that she was to be burned by a cigarette, and a pencil touched her hand. She winced with pain, and a half-hour later a

vesicle was present. Maud would quickly become deeply hypnotized even though she resisted.

Maud never slept and could not comprehend what sleep was. She knew that people lay down at night and closed their eyes, but thought it was a silly waste of time. She would go to bed when ordered, but would merely lie there until she changed to Sara. Sara never changed to Maud at night, although she often awakened, and Maud was never present overnight. Maud never got tired. She called Albert an old Stick-in-the-mud because he wanted to stay home and sleep nights.

Maud liked to dance with the other patients and was quite adept and graceful. She sometimes remarked that she wished she were a man and, in her dancing, took the male, leading part. She also liked to play cards. Maud always complained that she had nothing to do, while Sara, on the other hand, never wanted to do anything.

On the whole, Maud was a likable individual. She was gay, uninhibited, direct, and childlike. When her impulsive behavior first appeared, some consideration was given to the possibility that this might be merely the impulsive outbursts of a schizophrenic. Subsequent observation definitely disproved this. Maud appeared to everyone who came in contact with her to be an entirely different individual from Sara. As described in the foregoing, she had many physiological differences from Sara. There was a sharp demarcation between the two personalities; the transition was an abrupt change that occurred in about 15 seconds; and there was complete amnesia in each personality for the actions of the other. Finally, unlike Sara, Maud was by no means a typically schizophrenic type of individual. She was happy, active, interested in her surroundings, and had an infectious, mischievous sense of humor.

Another possibility considered was that the manifestations of the dissociation of personality might in some way have been the result of inadvertent suggestion. Therefore, a careful search was made for evidence of dissociation existing before hospitalization. A good deal of evidence was found and, since the point is important, is recorded in detail following.

In high school, although Sara was in the upper tenth of her class on her intelligence test, her grades were only slightly above the average. Some of her grades were remarkably inconsistent. For example, she got 96, 95, and 90 in geometry during one semester but on the final examination got 66. Her grades in literature ran 80, 50, 75, one term, and 93 on the examination; and in civics, 85, 80, 60, and 89 on the examination. Sara did not know why some of her grades were low, and, when she asked her teachers, was told only that her work was poor sometimes. The teachers who recalled Sara could not explain her low grades. Maud, on the other hand, said she never studied, never knew much, and although she cheated assiduously on examinations, could not understand how she got as good grades as she did.

Two of Sara's high school friends told the writer that she was "boy crazy" and was always chasing after some boy, often being rude to her girl friends, that she dyed her hair red, and that she smoked and used Listerine to deceive her mother about smoking. Sara denied all this, but Maud readily recalled it.

Albert had always considered Sara changeable and capricious. At times, she was very agreeable, and at other times she insisted on having her own way. He associated the latter mood with a change in her gait from a rather sedate one to a bouncing, swinging one in which she kept her elbows slightly flexed and swung her hands in a sort of frivolous manner. Various tastes seemed inconstant. At times, she would refuse wine; at other times she would enjoy drinking it. Sometimes she drank tea; at other times she said she disliked it. On direct questioning, Sara said she disliked wine and liked tea, while Maud liked wine and disliked tea. The reason for the latter distaste was because during her first pregnancy Albert had given her a good deal of tea and she wanted neither the pregnancy nor the tea.

One evening, at a dance hall, Sara was invited to dance by one of the entertainers. To Albert's displeasure, she not only accepted the invitation but continued to dance with the man for over an hour. On the way home she was very sweet and apologetic. When Sara was questioned about this, she recalled none of it. Maud recalled the whole incident, in fact, in greater detail than Albert.

After marriage, there was a little mixup when the couple's furniture was delivered, and they found some articles neither recalled ordering. The company had Sara's name on the order, however. Much more disconcerting to Albert was Sara's statement, a few days after they were married, "I wonder why in the devil I married you?" Sara did not recall this and denied it when Albert questioned her about it later. Maud recalled being surprised at the situation and wondering how she had been inveigled into a marriage she had no intention of contracting.

Albert often found that Sara was unable to account for money he had given her, despite her insistence that she closely followed a budget. Sara said that she never charged anything, but Albert had to pay grocery bills charged to her. The grocer recalled, at the time of her hospitalization, that Sara had charged bills, and Albert once found a note to the grocer, to be carried to the store by their child, which requested that the charge be "added to the bill." Sara recalled none of this, but Maud said she frequently charged things and used the money to buy silk stockings, fancy lingerie, or some bric-a-brac she liked. In regard to this, Sara often found clothes at home, gaudy red things as a rule, for either herself or her little girl, which she did not remember buying. Also, she got frivolous gifts from Albert which she did not want. Maud, of course, loved red, bought red clothes and furniture at every opportunity, and admitted she often asked Albert for expensive gifts.

Albert often complained that Sara was cruel to their little girl, Mary. Sara stoutly denied this, but Maud casually said that she hated Mary, often made excuses to spank her, and had frequently considered killing her. Maud loved her second child, however, because she felt it was Godfrey's.

Once, Sara walked a half-mile to the factory where Albert worked and in some way made him stop work and walk home with her in order to open a stubborn bureau drawer so that she could get out a douche can. Sara denied this, but Maud recalled it and thought it was a good joke. On another occasion Sara insisted that Albert move all their kitchen furniture to an unused room in back of the kitchen. When he had completed this laborious task, she asked him why he had done it. Maud recalled wanting the kitchen moved, and Sara recalled wondering why it had been done. On still another

occasion Sara insisted for a time that the family rent a flat far beyond their means. She later denied it; but Mary, as well as Albert, recalled it, as did Maud.

Albert's "unreasonable" jealousy was easily explained by Maud's statements. She admitted the truth of Albert's claims that she flirted with men on the street, as well as indiscretions that he was not aware of.

Maud, furthermore, explained a number of "accidents" which Sara had suffered. Maud had attempted suicide before hospitalization by cutting her wrist, and Sara, not knowing what happened, concluded she must have cut herself accidentally. (Why Maud persistently chose this ineffective method of attempting suicide is not known. She, herself, could offer no explanation. Sara recalled a friend who had successfully committed suicide by slashing her wrists.) Maud had repeatedly broken articles of furniture she disliked, and Sara had wondered what had happened. Sara, too, often rearranged furniture, wondering who moved it. Albert sometimes could not find an article of clothing, and Sara could not explain its disappearance. Maud said that if Albert had a shirt or something she disliked, she would throw it away or cut it up and make rags of it.

Sara was a prolific dreamer, and her dreams were, very interestingly, closely correlated with Maud's wishes. For example, Sara dreamed of intercourse with a stranger many times before hospitalization. After the relationships with the brother were recalled, she frequently had the same dream with him in the place of the stranger. Her reaction was one of pleasure and guilt. Maud, of course, openly wished for intercourse with the brother. Sara also had nightmares in which her father assaulted her. She would awaken terrified, and she related the dream with evidence of intense disgust. Maud enjoyed intercourse with the father and saw nothing wrong in it. Sara sometimes dreamed that her mother or older child was dead or that she was murdering her sister. Maud openly and calmly considered butchering all three.

It can be concluded that, in some form, a dissociated personality existed before the patient came to the hospital, and that thereby many of the puzzles of her existence were explained. Most of the gaps in Sara's memory were present in Maud's, and vice versa.

There was some overlapping. The dissociated personality, as it existed during the period of observation; did not, however, explain all the questionable points in her history. For example, there were gaps in Sara's memory which were months long. She did not recall some residences where the family had lived. This is difficult to explain since in the hospital Sara was never absent (i. e., Maud present) for more than a few hours at a time.

The reason for the change from one personality to the other was the subject of careful study. As has been said, the change occurred in about 15 seconds, and during this time, the patient appeared pre-occupied. The frequency of the change was once to four or five times a day, with an average of about five a week from October, 1941, through March, 1942; and many of the changes were directly observed. A few of the changes seemed entirely inexplicable, as once when Maud changed to Sara when she was alone in her room, in a hypnotic trance. For the change from Sara to Maud, however, the following hypothesis can be offered.

The last thing Sara remembered before changing to Maud was almost always connected with Godfrey. This might be merely an accession of desire for Godfrey, or rain, which made her think of walking in the rain with Godfrey; it might be the picture of a baby, reminding her of her own infant and again recalling Godfrey, or many other stimuli. For a time when Sara was kept locked in her room, a particularly noticeable and troublesome change to Maud frequently occurred when she went to the bathroom, and it was learned from experience that two attendants had to be present at that time. Sara later said that going to the bathroom reminded her of Godfrey because of a sexual incident that occurred in a bathroom. Still another stimulus was accidentally discovered. During one interview the writer was jingling his key ring with the ward keys on it when Sara changed to Maud and grabbed them. The next day, the writer gave the keys to Sara and told her to look at them and think about them. In a couple of minutes, she again changed to Maud. Before this occurred, it was then recalled, Maud had learned what the keys were for and often expressed a desire to get them and escape. When Sara became suspicious of the purpose of the maneuver, it was no longer effective. It worked again, much later, when she had forgotten the previous incidents. In

general, indirectly reminding Sara of Godfrey would usually cause a change to Maud, but direct methods were unsuccessful. Forcing Sara to smoke brought about a change to Maud a few times, until she became suspicious of this, too. Hypnosis and direct command or post-hypnotic suggestion failed to cause a change. As will be described, the writer's manner with Sara was different than that with Maud, but reversing it caused no change in the personalities.

Concerning the change from Maud to Sara, it must first be noted that the writer's relationship to Maud was not an ordinary patient-physician one, as it was with Sara. Maud was treated as a child might be. She wanted to be liked and was frequently reassured that the writer did like her, would be nice to her, and thought she was "good," not "bad" or "mean." Such statements, Sara would have considered incongruous and in bad taste. Maud often referred to the writer as her "guardian angel" or "Papa Lipton." Maud was always in doubt about whether the writer liked her, and the interesting correlation of this feeling to the change was that often when she was reassured, either when fully conscious or hypnotized, to the point where she was convinced that the writer did like her, she would change to Sara. As long as she remained in doubt, she stayed Maud. A few times, Maud was changed to Sara with partial success by direct post-hypnotic suggestion. She was hypnotized and told that after she woke up, at a signal, she would leave, and the "Angel Child" (as she derisively referred to Sara, judging from descriptions she had heard) would be present. She was assured that no attempt was being made to get rid of her and was told firmly that she understood the command. On a few occasions, after the signal was reiterated, Maud changed to Sara, who seemed confused and vaguely troubled and, after a few minutes changed back to Maud. Ordinarily, neither personality changed under hypnosis. Most of the changes from Maud to Sara occurred spontaneously for no apparent reason.

The study of the two personalities was intensely interesting but, meanwhile, Sara's condition grew steadily worse. She became more withdrawn and seclusive, blocked a great deal and talked less altogether, ate poorly, and dropped to 88 pounds. She showed marked loss of affect. She did not care if her husband and children died. Only Godfrey mattered, and she sat in her room hearing his

voice almost continuously. (She no longer heard orders for destructive behavior.) She also heard the patients and nurses calling her names (as did Maud). She lost interest in her personal appearance, and her troublesome acne and two extracted incisors were no longer a source of concern. She showed no insight and could not understand why she was in the hospital. Because of these increasing manifestations of schizophrenia, insulin shock therapy was started late in January. During her fourth treatment, before she had gone into coma, she had a convulsion and suffered a fractured thoracic vertebra, and the insulin was discontinued until mid-March.

On March 6, through some conflicting statements the patient made, a third personality was discovered. She identified herself as Sara and denied the existence of any other personality as did the other two. She was dubbed Ann. This personality was in existence a shorter time and was much more difficult to study than Maud because she changed back and forth with Sara rapidly, often two or three times in a half hour, and because the changes were difficult to perceive. Ann looked like Sara and for months had been mistaken for Sara, although she had many characteristics in common with Maud. She, too, had no skin sensation except touch, no sense of taste or smell. She could not move her arm from one position to another with her eyes closed. This was used as a test of her presence. Unlike Maud, she did sleep.

Godfrey was always "with" Ann and, like Maud, she hallucinated having intercourse with him. She recalled the relationship with her father, brother and the others as enjoyable and felt no guilt. She had learned that "people raised their eyebrows" about such things so she never spoke of them. Although she was happy, she wanted to commit suicide. She saw nothing depressing about it and would not explain her wish.

Ann could tell time but had no concept of time and did not know her age. Her handwriting was the same as Sara's and she spoke like Sara. There was one difference which she had carefully concealed. She discovered that Maud said "nuttin" while Sara was expected to say "nothing." She had always been in the habit of saying "nuttin," but after she discovered this, carefully corrected her enunciation. Some slips had been noticed, but they were dis-

regarded when she was asked to repeat the word and she said "nothing." She liked to smoke, and when she did had been mistaken for Maud, as was the case when she danced and played cards. A psychometric which it was thought was done on Sara, but which Sara remembered only vaguely and Ann recalled accurately, showed a mental age of 16.4, I. Q., 109.

Ann had memories that went back to high school, often overlapping Sara's and Maud's. Her recollections explained some gaps in their stories and some puzzling incidents that occurred during hospitalization. For example, in July, Sara had had a pelvic examination by a gynecological consultant. When questioned about it later, it was discovered that she had forgotten it; and this amnesia had never been explained. Ann recalled the examination very well, but she discovered that it was assumed that she had forgotten it. Therefore, she had consistently said that she had forgotten it.

It might be assumed from this incident and the enunciation of "nothing" that Ann was aware of her separate existence and consciously tried to conceal it. Such was not the case, however, and she vigorously denied any attempt at deception. She insisted that all her life she had been accustomed to meeting strange situations, that people had always expected her to know things she did not know and considered her peculiar if she admitted she did not know them. Therefore, she met situations as adroitly as she could. Another example of this adroitness was that she had never been dizzy. When she found herself in bed in the hospital she assumed she was supposed to stay there and did. It was she, not Sara, who on October 6, had demonstrated her ability to walk.

Parenthetically, it might be added that the failure to discover Ann in seven months of observation in the hospital, for a time even after a diagnosis of dissociated personality was made, is evidence of the skill with which the various personalities "covered up." This failure, also, allows one to understand better why Albert did not become more suspicious of some illness before her hospitalization. Albert did recall that Sara often complained that things did not "add up," but she could not explain further and he did not know what she meant. As stated, Sara and Ann changed back and forth so frequently, and it was so difficult to tell them apart, that studying them was very difficult. When the change occurred during

an interview, the patient would remain silent, seeking a clue from something the writer might say, or would ask some innocuous question, as "What are you thinking?" If she got the impression that the writer thought she did not understand something, she would say, "I'm sorry, I did not understand what you were saying." Undoubtedly, at the times many of the changes occurred, it was thought that the patient was hallucinating or blocking.

As an example of the way the memories of the three personalities overlapped, the following can be given. Sara recalled once that she had cut her finger at work, fainted, and recalled nothing until she came to with her finger bandaged. Maud, recalling the same incident, said she cut her finger accidentally, and wondered why everyone made such a fuss over it. Ann, in describing the same incident, said she had made a suicide attempt. Sometimes, too, Sara seemed to have a vague consciousness of what had happened to Maud. For example, after the writer had had a violent struggle with Maud, Sara might appear with the feeling that, for some reason, he was angry with her.

Meanwhile Sara's general condition grew alarmingly worse. On March 8, she stopped eating altogether and would allow nothing, not even a pill, to pass her lips. Within two days, this was true of all three personalities. Hypnosis was ineffective. Tube-feeding was started March 11 and continued for six weeks until the patient started to eat again. The aversion to food was so great that Sara found it difficult to tolerate tube-feeding, and Maud and Ann violently resisted it. Sara blocked more and more, and for about a month, starting March 15, was practically mute. During this time, Maud and Ann were occurring with less frequency.

Insulin shock therapy was resumed March 16. The patient was resistant, being at first unaffected by 300 units of insulin, and did not go into coma until April 8. She never did feel hungry. Treatment was continued, with great difficulty due to delayed reactions, until June 17 when the patient had had 59 treatments and 45 comas. Late in April she had begun to talk and eat, and there was some improvement through May and June. From April 28 to June 20, Maud was absent; and after May 2, Ann no longer appeared. For a day in mid-June, the patient seemed stupid and had a com-

pulsion to walk, but did not otherwise resemble Maud. She was later amnesic for this day.

Late in June, Sara was committed to a state hospital. At that time, she was talking and eating fairly well, loved her children again and was desirous of going home and taking care of them, was interested in her appearance and occupied some of her time with knitting. However, she had no insight and still hallucinated about a fifth of the time. She blocked completely on her hallucinations but would say that people were "funny" or that she could not understand why anyone should say her brother was in the hospital. Detailed questioning seemed inadvisable, but she appeared to have forgotten again much of her history. Maud was in her usual condition; and on her last night in the hospital, she smashed a window and cut her wrist when her compulsion to walk was not satisfied.

SUMMARY

A case of dissociated personality is presented. Evidence is cited to indicate that the disorder existed before hospitalization. The characteristics of the secondary personalities are described. The regressive and incomplete nature of the latter are similar to those of other reported cases.

ACKNOWLEDGMENT

The writer's sincere thanks are due to Dr. Maurice Levine, Dr. Thomas Ratliff, and Dr. Milton Rosenbaum of the Cincinnati General Hospital, and to Dr. Milton Erickson of Eloise, for their helpful suggestions concerning methods of approach and investigation.

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DIAGNOSIS OF PSYCHOGENIC FACTORS IN DISEASE BY MEANS OF THE RORSCHACH METHOD

BY M. R. HARROWER-ERICKSON, Ph.D.

In a preliminary study, "Personality Structure in the Psychoneuroses,"¹ nine so-called "neurotic signs" were isolated as characteristic of the Rorschach records of 43 neurotic patients, and these same signs were looked for in the records of a small number of normal, nonclinical control subjects. A significant difference in the incidence of these signs was shown to exist; there was an average of 6.5 signs to a record in the neurotic group and an average of 1.5 signs to a record in that particular group of controls.

That study was obviously incomplete for several reasons. The group of normal subjects was far too small for valid control. It was, moreover, too homogeneous a group. There was also the question—it was raised by Ross²—as to whether the 43 neurotic patients were a sufficiently representative clinical group, or whether, in order to isolate certain features clearly, there had not been some selective principle involved.

The present study, conducted over a period of two years, has attempted a more thorough investigation of these signs. The records of 385 control subjects from various walks of life, age levels, and intelligence have been used. Moreover, to insure that no selective principle was involved in the choice of neurotic patients, 100 consecutive cases were studied. These 100 patients were referred to the experimenter in the capacity of clinical psychologist at the Montreal Neurological Institute with some such question as: "Are there psychogenic factors involved in this case?" In other words, these patients had all presented symptoms for which no adequate organic causes had been found at the time. Serious questions had arisen in the mind of the referring physician, therefore, as to whether the patients' troubles were of neurotic origin. At the time of referring a patient, however, no final diagnosis had been made.

In some cases, no diagnosis was reached for months, even a year. The Rorschach report, therefore, was turned in, the diagnosis on the basis of personality made, and the number of neurotic signs recorded before a final clinical diagnosis was reached.

When at the end of two years all diagnoses were available, it was found that 26 of these 100 patients had been cleared of the neurotic stigma; for, on further investigation, some organic condition had been found; for example, a small neuroma on the arm was found to be responsible for pain which had been previously considered as psychogenic.

Twenty other patients were finally diagnosed clinically as both neurotic and somatic cases; that is, while there was a genuine belief that the individual was neurotic, some organic defect had also been found. (Such defects varied in severity from dental caries to a spinal cord tumor.) There remained, therefore, 54 patients with disturbances on a purely psychogenic basis, 54 who were unquestionably psychoneurotic.

It may be well at this point to state again the Rorschach signs which were originally felt to be characteristic of the records of patients clinically diagnosed as neurotic. These signs are listed here in tabular form (Table 1): The first column indicates the symbol employed; the second, *the signs as used in this study*; the third, the signs which are suggested as slight modifications of the ones

TABLE 1. THE SO-CALLED "NEUROTIC SIGNS"

Sign	Listed here when:	Suggested modification
R	Responses under 25	Responses under 12
M	1 M response or less	
FM	FM greater than M	FM <i>twice</i> the number of M and when no FM scores are present
F%	F score 50% or over	F score 50% and over and F score 10% or less
Fa	Failure on one card or more	
FC	No FC responses* **	
A%	Animal responses 50% or over	To be given <i>also</i> when animal and anatomy responses <i>together</i> equal 65% or over
A%	Anatomy responses 50% or over†	
CS	Color shock (failure, delay or F— response on colored cards)	
SS	Shading shock (failure, delay or F— response on cards IV and VI)	

*Originally given for FC 1 or less.

**Two additional FC's counting as one main response.

†Originally given for animal responses only.

used in the present study. These modifications are recommended to those who may wish to analyze material similar to the writer's along these lines, for they grew out of the present study and seem to sharpen the difference between the normal and "neurotic" record.

Four hundred and fifty-nine records, the neurotics and the various control groups, were analyzed from the point of view of these signs, those with five or more signs being put on the "black list."

Table 2 indicates the percentage of cases falling into this category in the various groups.

TABLE 2

No.	Classification	Percentage with 5 or more "neurotic signs"
54	Neurotics	85
20	Neurotics with somatic disturbances	65
26	Somatic disturbances only	15
108	College students, male	5
46	College students, female	11
40	Nurses in training	5
44	Aviation cadets	16
20	Superior adults	0
20	Superior adults	10
41	Convicts (I. Q. range 77-141)	27
40	Orderlies in R. C. A. M. C. (C grade)	38
385	Controls	15
74	Neurotics	80

The figures to the left refer to the number of subjects in each group; the figures to the right to the *percentages* of subjects in that group who showed five or more of these signs. The last two lines epitomize the results, for, of the 385 controls, 15 per cent showed five or more signs while of the 74 neurotics (that is all neurotic personalities regardless of the presence of somatic symptoms), 80 per cent showed five or more signs. It is very clear, therefore, that even between the worst group of normals, the orderlies, and the neurotics, there is a striking difference in the incidence of records with five or more signs.

Figure 1

Percentage of neurotic cases found among records showing the various numbers of signs
Total number of records—459

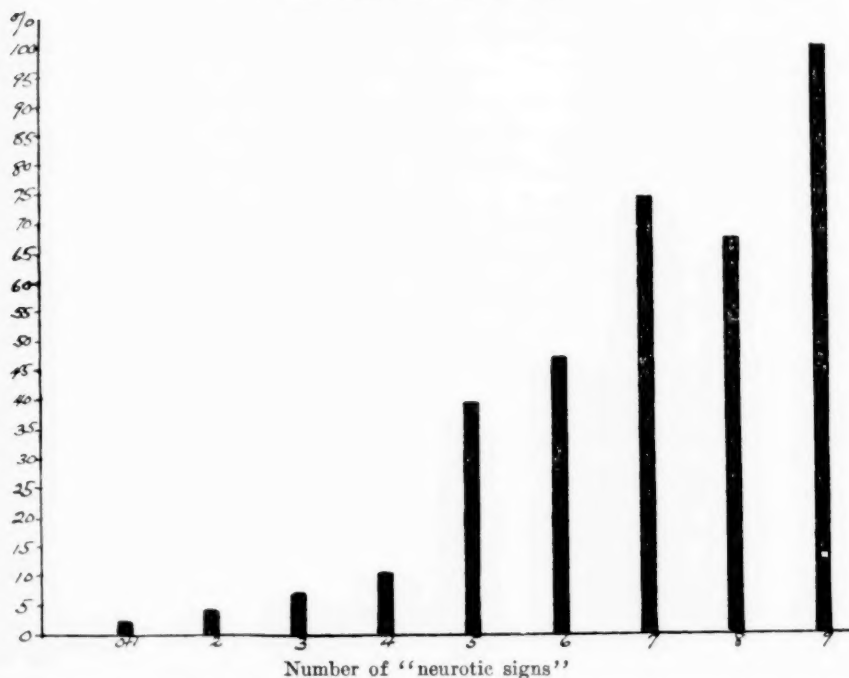


Figure 1 will perhaps serve to show this discrepancy even more clearly. In this, all records which showed the same number of signs have been considered as a unit, regardless of which group they came from. In the group having no sign or one sign (taken together because one sign alone gives absolutely no detrimental flavor to a record) there are 162 records. Of these, only 2 per cent are neurotic individuals. There are 41 cases where four signs appear, and 41 cases where five signs appear. In the four-sign group, there are 10 per cent of neurotics; but in the five-sign group, 39 per cent are neurotics, nearly four times as many—an indication that this is an appropriate dividing line. Of the cases who showed nine signs, all, or 100 per cent, are neurotic individuals.

The value of these signs for differential diagnosis has been proved, the writer thinks, in so far as this particular group of patients is concerned. On the basis of the distribution of these

signs alone, it would have been possible to pick up 80 per cent of the neurotic patients, and to pronounce as not neurotic 85 per cent of those who subsequently turned out to have organic causes for their symptoms.

There is further advantage to such a set of signs. It is possible to have them recorded from scored records by persons whose Rorschach training is only partially completed, who could not be entrusted with a differential diagnosis unless certain objective landmarks could be followed.

One of the limitations of the method of judging by signs alone at the present moment is the fact that not all types of neurotic records show up equally clearly in terms of signs, for example the obviously compulsive type of Rorschach record with 100 responses, 95 per cent of which are F. Such a record, provided it includes 2 M's, a single FM, and 1 FC, which is not unusual, escapes the signs R, M, FM, and FC, and since such individuals rarely show CS (color shock), or SS (shading shock), they must be placed in the two-sign or at most in the three-sign group.

A further limitation, one may say, is the failure of the signs to catch that 20 per cent of the neurotic patients who do not show five or more signs. Although very few clinical procedures can claim 100 per cent accuracy, it is, nonetheless, worth while to consider why these particular records escaped detection.

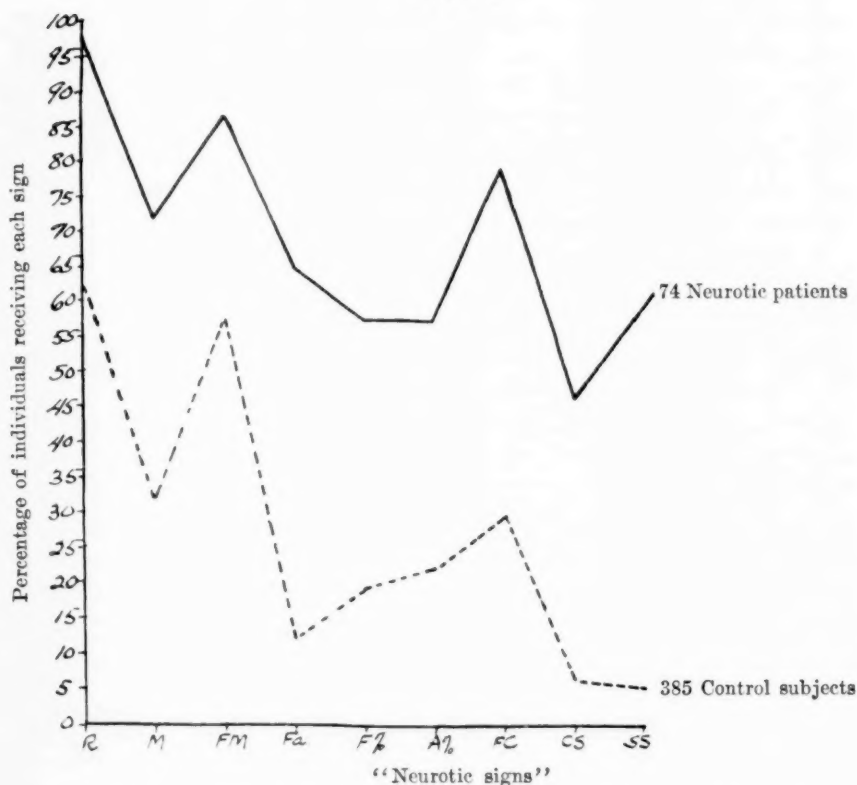
Let us consider first those individuals who showed no signs at all, one sign, and two signs. These constituted 6 per cent of the neurotic group. Here we have to ask: "Did these records contain features which were recognizably bad but which just did not happen to be covered by this distribution of signs; or were they records which judged by any set of accepted standards were satisfactory; that is, records of apparently well-adjusted individuals?" The latter alternative is unquestionably correct in these particular cases.

There is another group of records, however, namely, those with three or four signs, where the problem is different; for here, despite the fact that they could not be put on the "black list" with "five or more signs," the records were frequently of such a quality as to make one suspicious of some psychogenic factors in the clinical pictures. These were frankly borderline cases, but if the stand-

ard had been lowered to include as "neurotic" all those with four or more signs, there would have been erroneously included 25 per cent of those who subsequently proved to have purely somatic disturbances.

In order to deal with these limitations, it is necessary to include with these signs some kind of weighting device. Figure 2 gives the basis and justification for such a weighting device. In this table, the percentages of individuals showing each of the nine signs have been plotted both for the neurotic group and for the controls.

Figure 2



Several interesting features should be noted here. First, it can be readily seen, and this is an important point, that there is nothing pathognomonic of a neurotic record in any single sign. All signs

are found in the records of normal or nonclinical subjects *but to a lesser degree*.* Second, there are three points on this curve where the more or less constant discrepancy or gap between the normals and neurotics becomes more marked, that is, where the difference between the percentages increases sharply. They are at Fa (failure), FC, and SS (shading shock).

In terms of the greater incidence of these three signs in the records of neurotic patients, it is suggested that they are more likely to be indicative of neurotic personalities and should therefore receive heavier weighting, let us say three points each. On this same principle, the signs M and CS would receive two points; F%, A%, and R, one point; and FM greater than M, one-half point. Two subjects, therefore, each with four signs might make very different scores, or neurotic indices, when evaluated with the weighted signs.

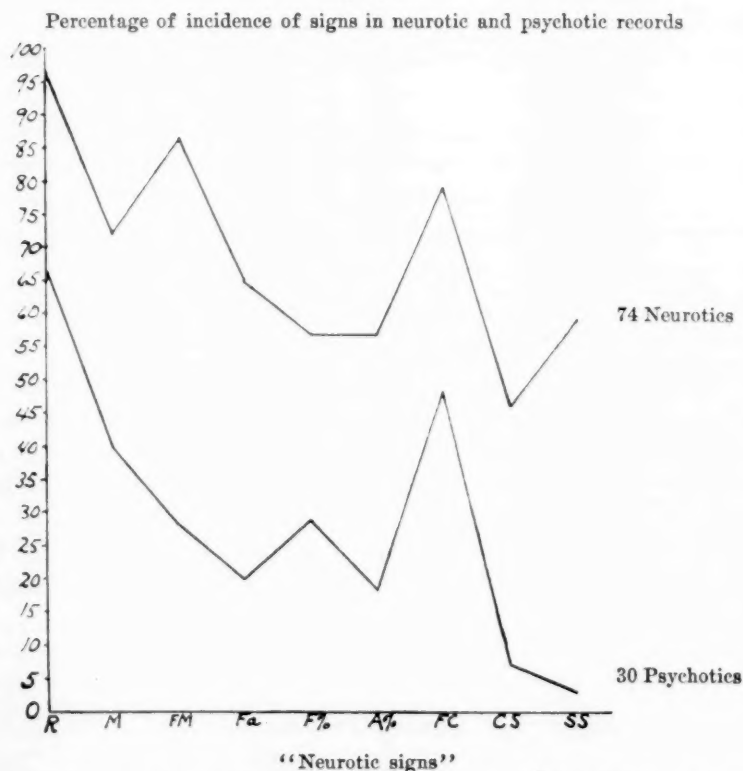
In conclusion, one other point may be discussed. A question has often arisen as to the extent to which these signs can be used to differentiate the neurotic record from the psychotic or organic. Or, put in another way, is it not possible to find as many as five signs in the "typical organic record," and would not a group of psychotics show more individuals who fell in the "five or more" category than do normal controls? It is certainly possible to find five signs, R, M, F%, Fa, and A% (due to perseveration) in a typical organic record, but if the record has already been recognized as "typical" either by comparison with the psychograms of brain tumor patients³ or by the high incidence of Piotrowski's signs,⁴ then there is surely no diagnostic problem; and it is pointless to utilize the particular constellation of signs discussed here.

Concerning the records of psychotics we have, in many cases, outstanding characteristics which leave no room for doubt, for ex-

*Recent work by H. K. Torrance, as yet unpublished, shows that these signs are found in a high percentage of cases of delinquent boys. There is also a high incidence in the records of the soldiers which were reported by Ross (Ref. 2). These men were described by the author as "... many were recent recruits to a unit which was drawing upon the unemployed, and the individuals allocated for examination included many whose competence was in question by their officers and about whose potentialities the officers were desiring such information as the test might give. The group may have contained a large number of individuals of low intelligence and possibly a large number of potential neurotics but they were all symptom free and fit enough to pass the army physical examination."

ample, contamination, bizarre responses, and a discrepancy in the quality of F's.^{5, 6, 7} However, disregarding these characteristics and dealing only in terms of the signs, it has been found in a preliminary study with 30 psychotic patients that while a greater percentage than in the case of normal controls will be shown to have over five signs, the number will not be nearly so high as in a group of neurotic patients. Moreover, when the incidence of the individual signs shown in the psychotic records is plotted against the normal or the neurotic, the curve will be found to have its own pattern in contradistinction to that of the neurotic or normal (Figure 3.)

Figure 3



Note particularly the difference in the incidence of the signs FM and SS in the two groups

It is by no means certain that the results obtained here could not have been improved upon by a further variation in the signs which were originally chosen. Consequently, the writer's last word will be one which emphasizes the fact that such signs as have been suggested are in no way final. Since R is found so frequently both in neurotics and normals, it may be better to discard it altogether or to drop it to less than 12 instead of less than 25 responses. Since FM greater than M is also a common feature of the normal record, particularly in the college group, it might be well to establish a critical ratio in the nature of twice or three times as many FM's as M's, and at the same time to include under this sign the absence of all FM responses in a record. Since a record may have just under 50 per cent anatomical responses and just under 50 per cent animal and yet not score either of these as a sign, the writer would further suggest that anatomy plus animal responses, when together constituting 65 per cent of the total, be accorded the A% sign.

SUMMARY AND CONCLUSIONS

If the patient's condition merits the suspicion that psychogenic factors may play an important part in it, have we a tool by which to confirm that suspicion and to estimate the degree of his psychological maladjustment? The writer has attempted in this study to show that certain Rorschach criteria, or quantitative signs, may provide such a diagnostic aid.

Five or more of these nine "neurotic signs" (which may easily be determined without the full Rorschach interpretation) were found in the records of 80 per cent of a group of 74 clinically diagnosed neurotics, and were found in only 15 per cent of the records of 385 control subjects. It must be emphasized, however, that there is nothing pathognomonic of the record of a neurotic patient in any one of these signs taken alone. Moreover, various groups of maladjusted persons other than clinically diagnosed neurotics may show a higher incidence of these signs than did the normals in this study. Nonetheless, the fact remains that these signs have proved of real value in differentiating those maladjusted patients whose physical conditions were mainly or entirely due to psychological

factors, and conversely to point to the basic psychological adjustment of other patients in whom organic lesions responsible for their symptoms were later found.

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ABNORMAL BRACHIAL BLOOD PRESSURE RESPONSE TO POSTURAL CHANGE IN PATIENTS SUFFERING FROM PSYCHOSES OF THE SENIUM. CONTROL BY THYROID

BY D. EWEN CAMERON, M. D., D. MELE, M. D., H. S. HIRST, M. D., AND
F. FELDMAN, M. D.

The writers have recently reported evidence (Cameron et al., 1940) which suggests that the utilization of oxygen by the senile brain may be reduced. Moreover, the similarity of some of the behavioral reactions seen in the psychoses of the senium to certain of the reactions occurring in persons subject to chronic anoxia was pointed out. The reactivity of the vascular system is clearly of great importance in the maintenance of an adequate oxygen supply. While it has been shown (Forbes, Wolff, 1928; Forbes, Cobb, 1938) that the intracranial vessels have their own autonomic system, the control exercised by this is relatively weak; and definite changes in the general blood pressure tend to be reflected in the blood pressure of the intracranial vessels. Moreover, it has been demonstrated that cerebral blood flow is highly correlated with systemic blood pressure (Forbes, 1939). Clearly if undue fluctuations in blood pressure occur in consequence of postural change, it will be impossible to maintain a constant cerebral blood flow, and consequently the amount of oxygen available to the brain will fluctuate. For these reasons, it was considered that an investigation of the effects of postural change upon the brachial blood pressure in senile patients might afford information of value concerning the constancy of oxygen supply to the brain.

Certain of the observations already made in this field are applicable to the present problem. Hill (1895) showed that the intra-carotid blood pressure in animals was increased by tilting to the head-down position and was decreased by tilting into the head-up position. Bennati and Mazzucco (1935) have shown that similar changes occur in the intra-aortic pressure in dogs. They throw further light on the subject, however, by showing that these changes are much more marked if the vagi and nerves to the carotid sinuses are cut. This suggests that in these animals there exists a mechanism which tends to minimize the amount of change in pressure produced by alteration of position.

Brachial artery pressures estimated by means of the blood pressure cuff (Ellis, 1921; Mortensen, 1923; Ghrist, 1930) indicate that when the human subject is put in the head-up position, the systolic pressure tends to fall, while the diastolic rises. When the body is tilted into the head-down position, the systolic pressure rises and the diastolic falls. Where the postural changes are not passive, i. e., where the subject stands up or lies down, the systolic responses tend to be rather different; under these circumstances, there is more often a rise in the systolic pressure on standing up and a fall lying down.

Loman et al. (1936, first report cited) have shown that in man the intracarotid pressure also tends to fall on tilting the bed into a head-up position and rises on tilting the bed into a head-down position; at the same time, they measured intrabrachial pressure and found that changes in the opposite direction occur. On tilting the subject to the head-up position, the brachial pressure rose; and on tilting him into the head-down position, the pressure fell; on maintenance of the posture, there was a tendency for compensatory changes to occur which minimized the amount of deviation from the original pressure. In a series of six patients suffering from severe arteriosclerosis, Loman et al. (1936, second report cited) have reported that the changes in pressure in the carotid artery are more marked and there is little evidence of compensatory control.

PROCEDURE

The subject in the present investigation was placed on a Saunders oscillating bed (this bed is motor-driven and tilts around a central axis; the speed and degree of tilting are adjustable.) In this case, the excursion of the bed was adjusted so that the head and feet deviated by 13 inches in either direction from horizontal: In other words, the total excursion of both head and feet from the head-down position to head-up was 26 inches. The angle through which he was passed was 25°. The time taken for maximum rise to maximum fall was 85 seconds. The patient had a rest period of half an hour before tilting was started. The bed was then set in motion, and blood pressures were taken from a cuff over the brachial artery as the patient passed into the completely head-up and head-down positions. Fifteen consecutive readings were taken

on each patient. Sixteen normals, having an age range from 20 to 40 years, and 31 patients suffering from psychoses of the senium were examined. An additional 10 patients were studied in the second part of the investigation.

RESULTS

Inspection of Table 1 shows that the dominant response in the normal group is either maintenance of pressure or rise in systolic and diastolic pressure in the head-up position and a fall in both in the head-down position. This dominance is greatly reduced in the senile group.

TABLE 1. TYPE OF BLOOD PRESSURE RESPONSE TO POSTURAL CHANGE

	Normal control	Senile group
Number of B. P. readings.....	213	466
Number of abnormal* systolic responses....	14	263
Number of abnormal* diastolic responses..	23	126
Per cent abnormal systolic responses.....	6.6	56.4
Per cent abnormal diastolic responses.....	10.8	27.0

*Abnormal responses—a fall in pressure on assuming the head-up posture or a rise on assuming the head-down posture. Maintenance of pressure or a fall in the head-down and a rise in the head-up are considered normal, i. e., evidence of an effective compensation mechanism.

Table 2 shows the frequency distribution of abnormal responses.

TABLE 2. FREQUENCY DISTRIBUTION OF ABNORMAL B. P. RESPONSES

		Systolic								
	mm. Hg.	0-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45
Seniles	head-down	49	49	16	12	2	1	0	0	0
	head-up	41	49	16	10	3	1	1	0	2
Normals	head-down	6								
	head-up	8								
		Diastolic								
Seniles	head-down	45	17	2						
	head-up	42	16	4						
Normals	head-down	14								
	head-up	9								

A response is considered abnormal when a fall in either systolic or diastolic pressure occurred in assuming the head-up position, or a rise on assuming the head-down position. It will be noted that the systolic pressures show more and greater deviations from normal than do the diastolic among the senile group. Only 34.2 per cent of the abnormal systolic responses are found within the same range as the diastolic. In the control group, it was noted that deviation from the normal occurred more frequently in the diastolic than in the systolic pressure. This may possibly be due to the greater difficulty in determining the diastolic pressure, or it may be due in part to the fact recorded by Barry, 1941, that the venous congestion which tends to occur in the arm on assuming the erect posture causes a concomitant increase in the diastolic pressure. Because the amount of postural change was much less in the present investigations than in Barry's studies, this factor is not likely to exert a large influence.

The distribution of abnormalities by cases is shown in Table 3.

TABLE 3. DISTRIBUTION OF ABNORMAL RESPONSES BY CASES

	Normal controls	Senile group
Total cases	16	31
Cases showing no abnormal responses.....	10	1
Cases showing abnormal responses within 0-5 mm. Hg.....	6	6
Cases showing abnormal responses of greater magnitude than 5 mm. Hg.	0	24

It will be noted that, while the normal group does not contain any cases having a greater abnormality than 0-5 mm. mercury, 77.4 per cent of the senile group do show greater abnormalities.

DISCUSSION

Two major points emerge from these investigations. The first is that the findings with regard to the systolic blood pressure differ from those previously reported. The second is that the responses of both systolic and diastolic pressure in the normal group can be reasonably clearly differentiated from those found in the senile group. The reason for the difference of the findings with respect to the systolic pressure would appear to lie in the fact that the

angle at which the subjects were tilted is much smaller than that which other investigators employed.

Ghrist, who tilted his subjects from the recumbent to an erect posture, noted that blood pressures taken when the subjects had been tilted up through 22.5° showed that the systolic was maintained at its former level. It fell slowly as the posture tended toward the erect. In this connection, it should also be noted that most observers are agreed that the diastolic pressure rises on assuming the head-up posture and falls on assuming the head-down posture, the systolic showing the reverse changes. In other words, while the systolic tends to be influenced more largely by gravity, the diastolic pressure is more completely controlled by compensatory mechanisms. Clearly, the active compensatory mechanism, which regulates the systolic pressure, should more readily show changes if greater stress is put upon it, i. e., tilting through a larger angle. Moreover, it seems reasonable to anticipate that if the cardiovascular system suffers widespread impairment, as is the case in generalized arteriosclerosis, the systolic blood pressure with its relatively limited compensatory mechanisms will show more extensive incidence of abnormal responses to postural change. This latter statement appears to find its justification in the fact already referred to, namely, that the number and extent of abnormal systolic reactions in the senile group are very much greater than the abnormal diastolic reactions. This indicates that the mechanism regulating diastolic pressure is more active than that regulating systolic pressure, and this is in line with what other investigators have found in tilting through greater angles.

The second point, namely, the relatively sharp differentiation of the normal from the senile group, is important. It indicates quite clearly that the maintenance of a steady circulation in the senile group must be much impaired. In consequence, the difficulty of assuring an adequate oxygen supply to the tissues is increased. Reference has already been made (Cameron et al., 1940) to the similarity between certain of the behavioral changes found in the senile individual and those produced by anoxemia. These findings with reference to the apparent damage to the cardiovascular control mechanism are further evidence that the reduced oxygen consumption of the aged may not be entirely due to reduced capacity to

utilize oxygen, but may in part be due to a reduced ability to supply oxygen to the tissues.

CONTROL OF ABNORMAL RESPONSES

Numerous attempts were made to find a means of controlling these abnormal reactions. Since the blood pressure compensatory mechanisms are dependent for their action upon the activities of the autonomic nervous system the writers investigated the effects of adrenalin, ephedrine and benzedrine. These substances either had no influence upon the incidence of the abnormal responses or tended to increase their frequency and severity.

Thyroid was then investigated because of its action in the sensitizing of the autonomic nervous system (Sollman, 1936) and because its action in this respect was slower in development and more continuous than could be achieved through the usual methods of administration of the substances mentioned in the foregoing.

THYROID EXPERIMENTS

A. *Procedure*

An additional group of 10 senile patients was selected and their reactions to postural change were recorded in the manner described. Following this, they were put on thyroid, grains 1 t. i. d., by mouth. At the end of five to six days they were checked once more with respect to their blood pressure changes in response to posture.

RESULTS

The results are shown in Tables 4 and 5. From Table 4 it will be seen that the response to thyroid is differential. In four out of the 10 cases there was a definite improvement in both systolic and diastolic blood pressure responses. In two, the improvement was in the systolic alone. In one, definite improvement took place in the diastolic pressure response; those occurring in the systolic were so slight as to be within the range of technical error. In the three others, there was either no improvement or it was again within the range of possible technical error. The writers have no information as yet concerning the reason why certain patients seem to respond better than others with respect to their blood pressure responses to thyroid administration.

TABLE 4. BLOOD PRESSURE ADJUSTMENT TO POSTURE IN SENILES BEFORE AND AFTER THYROID TREATMENT

Number of abnormal reactions per patient for each 15 changes in posture

Patient	Systolic		Diastolic	
	Pre-thyroid	Post-thyroid	Pre-thyroid	Post-thyroid
1.*	7	4	9	1
2.*	9	5	4	3
3.*	12	5	6	4
4.'	4	4	7	6
5.°	6	5	10	4
6.*	7	3	6	3
7.'	14	15	15	14
8.x	8	4	3	5
9.x	11	5	10	5
10.'	8	8	8	7

*Both systolic and diastolic improved; xSystolic improved; °Diastolic improved; 'No improvement.

From table 5, it will be seen that if a group is taken as a whole improvement can be demonstrated in both systolic and diastolic pressures. The number of abnormal systolic responses before thyroid was 185; after thyroid administration, 110 such responses were recorded. The rise in abnormal responses in the 26 to 30 mm. Hg. category after thyroid administration was due entirely to one patient. The number of abnormal diastolic responses before thyroid was 135, and after thyroid the number was 87.

TABLE 5. FREQUENCY DISTRIBUTION OF ABNORMAL BLOOD PRESSURE RESPONSES IN 10 SENILE PATIENTS BEFORE AND AFTER THYROID ADMINISTRATION

		mm. Hg.					
		0-5	6-10	11-15	16-20	21-25	26-30
Systolic B. P. differences	Before thyroid	65	78	20	17	2	3
	After thyroid	42	40	10	7	1	9
Diastolic B. P. differences	Before thyroid	71	53	8	2	1	
	After thyroid	42	41	3			

No consistent improvement in behavior was observed in these patients after administration of thyroid. It is of interest to note, however, that thyroid has been suggested apparently empirically in the treatment of the psychoses of the senium. (Carlson, 1939.) The writers' period of observation of these patients after thyroid

had been administered had been 10 to 14 days. It is conceivable that, if the abnormal blood pressure changes were kept in abeyance by thyroid over longer periods, some improvement in behavior might be noted. It is also possible that special groups within the senile psychoses which respond favorably to thyroid may be delimited.

SUMMARY

1. Forty-one patients suffering from behavioral disorders occurring in the senium and 16 normal controls were investigated concerning the effects of limited postural change in the brachial blood pressure.

2. Tilting the head up or down 12.5° from the horizontal produced maintenance of pressure or rise of systolic pressure in 93.7 per cent of trials, and in the diastolic pressure in 89.2 per cent of trials in the control group.

3. In the senile group, the figures for systolic were 43.6 per cent and for diastolic 73 per cent.

4. None of the control group showed a greater deviation from the dominant response than 5 mm. Hg. Of the senile patients, 77.4 per cent showed abnormal responses of greater than 5 mm. Hg.

5. Thyroid given by mouth to 10 senile patients resulted in decrease of abnormal responses in both systolic and diastolic pressures in four instances, decrease in abnormal systolic responses in two cases, and in diastolic response in one case. In three cases, there was no definite change noted in systolic or diastolic pressure.

6. It is concluded that there is definite evidence that the compensatory mechanism controlling the blood pressure level during postural changes is markedly defective in patients suffering from psychoses of the senium, and that oral administration of thyroid may ameliorate this deficiency.

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A NOTE ON THE PNEUMOENCEPHALOGRAM AND ELECTRO- ENCEPHALOGRAM FINDINGS IN CHRONIC MENTAL PATIENTS*

BY ELVIN V. SEMRAD, M. D.,† AND KNOX H. FINLEY, M. D.

There is a large number of mental patients who require prolonged or indefinite mental hospital care. They are the patients who "did not get well enough" to return to a community adjustment. The writers have been very much interested in the problems of these patients and have used several techniques to supplement the clinical study of them. In this communication, however, they plan to bring up for discussion the findings revealed by the pneumoencephalogram and the electroencephalogram.

The writers studied 77 patients, 60 of whom were diagnosed as cases of schizophrenia, nine psychosis with mental deficiency, and eight psychosis of the organic reaction type¹ (three cases of general paresis, one of Huntington's chorea, two of alcoholic psychosis, one of epidemic encephalitis, and one of posttraumatic psychosis). The majority of patients were hospitalized over 10 years, the minimum was three years, the maximum, 35. Their ages at the time of the tests varied from 21 to 58; most of the cases being in the 30 to 39 group.

TECHNIQUE OF PNEUMOENCEPHALOGRAPHY (PEG) AND OF ELECTROENCEPHALOGRAPHY (EEG)

The pneumoencephalograms were taken under barbiturate anesthesia, (sodium penthathal, avertin, or evipal) in the sitting position. Air, oxygen or mixtures of both were used for contrast media. The films were interpreted by Dr. T. J. C. von Storch and Dr. Edward Vogt independently and reviewed by the authors. Only those films upon which there was unanimity of agreement were included in this study. They were classified as normal (Figure 1) or abnormal (Figure 2). Films showing inadequate filling or other

*From the Metropolitan State Hospital in cooperation with the EEG Laboratory of the department of psychiatry, Harvard Medical School, at the Boston Psychopathic Hospital. This work supported in part by grants from the Scottish Rite Masons Fund for Dementia Præcox and the Proctor Fund. Read before the meeting of the Massachusetts Society for Research in Psychiatry, March 12, 1942.

†Since this paper has been written, Dr. Semrad has been called to active duty with the medical corps of the United States Army. He was stationed, at the time of his latest communication to THE QUARTERLY, at the Station Hospital, Camp Edwards, Massachusetts.



Fig. 1

Normal pneumoencephalogram: ventricles are of normal size, shape and position. Cortical outlines are within normal limits. The patient is H. N., aged 25, diagnosed alcoholic psychosis, other types (marked schizophrenic features).



Symmetrical enlargement of lateral ventricles. Very little air in the subarachnoid spaces. The patient is J. J., aged 38, diagnosed schizophrenia, hebephrenic type, hospitalized 15 years.



Fig. 2

Moderate enlargement of lateral ventricles, with normal amount of air in the subarachnoid spaces. In the frontal view the left ventricle is seen to be larger than the right. Patient is E. D., aged 25, diagnosed schizophrenia, hebephrenic type, hospitalized six years.



technical errors were not included. Some of the pneumoencephalograms were taken by associates* of the Metropolitan State Hospital staff.

The electroencephalograms were taken with a six-channel apparatus of the Grass make. Six simultaneous recordings were obtained over the frontal, precentral and occipital lobes of each hemisphere, using the "bipolar" and monopolar electrode combination in each instance. Where the clinical history or pneumoencephalographic findings suggested a focal cerebral lesion, EEG localization studies were made from six or eight electrode placements over each hemisphere. The EEG's were interpreted by one of the authors (K. H. F.). The EEG's, Figure 3, were classified as normal borderline, or abnormal.

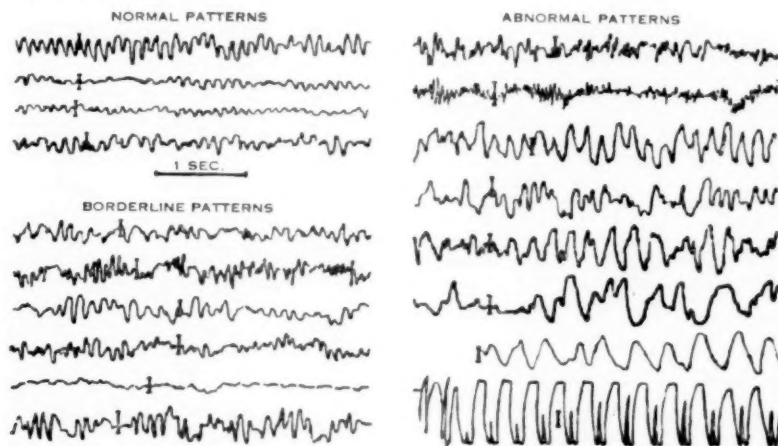


Fig. 3

Samples of normal, borderline, and abnormal electroencephalographic patterns, the degree of normality or abnormality of the patterns having been determined by their occurrence in normal controls and known organic disorders of the central nervous system. The vertical ink line drawn through the tracing is equivalent to 50 microvolts while the horizontal line represents one second of recording in this figure.

The occurrence of normal and abnormal pneumoencephalograms and electroencephalograms is shown in Table 1.

*Dr. Clementine C. McKeon, Dr. Richard C. Cooke, Dr. Emerick Friedman, and Dr. Paul Wilcox.

TABLE 1. OCCURRENCE OF NORMAL AND ABNORMAL PNEUMOENCEPHALOGRAMS AND ELECTROENCEPHALOGRAMS IN 77 CASES OF CHRONIC PSYCHOSES

58%	(45 cases)	showed abnormal pneumoencephalograms
69%	(53 cases)	showed borderline or abnormal electroencephalograms
17%	(13 cases)	showed normal PEG and normal EEG
12%	(9 cases)	showed normal PEG and borderline EEG
13%	(10 cases)	showed normal PEG and abnormal EEG
14%	(11 cases)	showed an abnormal PEG and normal EEG
44%	(34 cases)	showed an abnormal PEG and a borderline or abnormal EEG

The percentage of normal, borderline and abnormal records in normal (215 cases, K. H. F.) controls and patients with major and chronic psychosis are shown in Figure 4.

One of the purposes of this study was to determine if one could find any correlation between the characters of the electroencephalograms and the pneumoencephalograms. Do certain types of patterns occur consistently in cases showing dilated ventricles without cortical atrophy? Do other types of tracing occur with pneumoencephalograms showing only cortical atrophy? Finally, are there certain types of tracings that are likely to occur with a combination of dilated ventricles and cortical atrophy? From this series of cases, there was no single type of tracing that was consistently found with a given type of pneumoencephalogram. In two cases in which the EEG tracings showed the best organized rapid 20 to 25 per second activity, the pneumoencephalograms showed the most pronounced cortical atrophy. One of these also showed mild dilatation of the ventricles. Rapid frequency cycles of the less consistent and less organized character were common in those cases showing milder degree of cortical atrophy. However, rapid frequency cycles were also found in cases showing dilated ventricles without cortical atrophy and in cases with normal pneumoencephalograms.

In a recent study by Trowbridge and Finley² on the electroencephalogram and pneumoencephalogram in 68 patients suspected of having neurological disorders of the nonfocal type, no normal records were found in cases showing dilated ventricles. In this present study, however, there were three cases showing moderate enlargement of the ventricles in which the EEG tracings were normal. This present study, therefore, shows that normal records may occur in cases showing dilated ventricles.

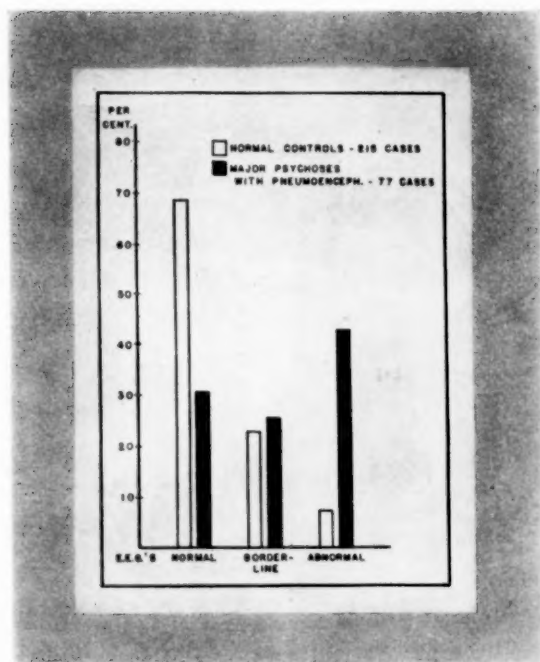


Fig. 4



In general, the present study shows no consistent relationship between the characters of the electroencephalographic tracings and the findings from the pneumoencephalograms. Either procedure, the writers believe, may give evidence of some type of cerebral disorder without confirmatory evidence from the other, although in this series of cases 44 per cent had both abnormal PEG'S and borderline or abnormal EEG's. This is in keeping with the conclusion of the previous investigation (Trowbridge and Finley).

For further study of the general schizophrenic group it seemed desirable to survey the writers' findings in their relation to somewhat more precise clinical analysis. For provisional grouping, they used a simple formulation—as did Finley and Campbell²—for purposes of correlating the data: 1. Simple deterioration (D. P. S.) cases of primary deterioration where the patient is anergic, indifferent, tends to live a parasitic existence—two of the writers' 60 cases were classified in this group. 2. Schizophrenia of catatonic-hebephrenic type: cases of reduced or variable accessibility and productivity with more emotional tension than in Group 1 cases and with frequent breaking through of crude tendencies; 50 of the writers' 60 cases (31 hebephrenic, 19 catatonic) were classified in this group (Table 2). 3. Schizophrenia of paranoid type, i. e., cases in which a distorted attitude or delusions are the prominent feature of the psychosis; five of the 60 cases were classified in this group. 4. Schizophrenia of other types: a heterogenous group difficult to differentiate and place in the first three categories but whose kinship to the other schizophrenic conditions is suggested by the clinical picture and poor prognosis; three of the 60 cases were classified in this group.

TABLE 2. FREQUENCY OF NORMAL AND ABNORMAL PNEUMOENCEPHALOGRAMS
AND ELECTROENCEPHALOGRAMS IN 50 CASES OF SCHIZOPHRENIA
CATATONIC-HEBEPHRENIC TYPE

58% (29) of these had abnormal PEG
64% (32) of these had abnormal EEG
42% (21) had both abnormal PEG and borderline or abnormal EEG
20% (10) had a normal PEG and EEG
16% (8) had abnormal PEG and EEG
22% (11) had a normal PEG and borderline or abnormal EEG

The writers have also added the factors of age and duration of hospitalization to give a clearer idea of type of patient dealt with. The majority of the patients presented some signs of "deterioration," desire for solitude, retreat from organized activity, passivity, mutism, nonsociability, mannerisms, untidiness, with histories of hallucinations and delusions.

Fifty-three of the 60 schizophrenic patients had been hospitalized over five years; 41 over 10 years. Most of the schizophrenic patients were over 30 years of age at the time of the tests.

SUMMARY

1. Seventy-seven chronic mental patients were studied by pneumoencephalogram (PEG) and electroencephalogram (EEG).
2. Forty-four per cent (34 cases) showed abnormal PEG's, and borderline or abnormal EEG's.
3. Seventeen per cent (13 cases) showed normal PEG's and normal EEG's.
4. Forty-two per cent (21 cases) of the cases diagnosed schizophrenia had both abnormal PEG's and borderline or abnormal EEG's.
5. Twenty per cent (10 cases) diagnosed schizophrenia showed normal PEG's and normal EEG's.
6. There was no consistent relationship between the character of the EEG tracings and the findings from the PEG.

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A RORSCHACH DIAGNOSIS OF CEREBRAL ARTERIOSCLEROSIS

BY LIEUT. KENNETH S. HITCH, A. G. D.

INTRODUCTION

This case has been extracted from the group of Rorschach examinations at the Station Hospital, Fort Dix, N. J., previously reported by Brussel and Hitch,¹ and is presented as an example of a Rorschach diagnosis of unusual interest and exactitude.

The examination was made without any knowledge of the patient except for these facts: (1) The age was over 50; (2) the man had a temperature elevation of over 100 degrees. The interpretation was made independently of the chief neuropsychiatrist and ward officer, and without any questioning of the patient except for the usual Rorschach inquiry.

It is proposed to present the protocol, tabulation, analysis of the record, and derivation of the diagnosis. The clinical evidence and the independent diagnosis of the neuropsychiatrist and medical ward officer will be offered.

RORSCHACH PROTOCOL, NOVEMBER, 1941

Card I.

1. Looks like a bat. (Whole.)
2. Hips. (Center detail.)
3. Penis (hanging down). (Lower center projection.)
4. Gland of neck and neck pipes. (Upper center region.)
5. Stomach. (Lower center, indefinite.)

Card II.

1. Blood on the two heads and both sides. (Upper red.)
2. This might be my lung. I spilled blood years ago. (Same)
3. Ribs on both sides. (Striations within black details.)

Card III.

1. Two men cooking in a pot. (Usual.)
2. Blood behind both heads. Now blood between them.
(Upper red.)
3. Neck part is blood away from my head.

Card IV.

1. That's the whole insides; head down to the spinal region . . . that is very clear, very clear. (Whole.)

Card V.

1. Arms, muscles is all right. (Whole.)
2. This is me in here; legs are very straight. Everything is clear and very good in here. (Center form.)

Card VI.

1. I have had two spines and now this makes the third one. A good spine, lungs in here. One thing is I'm all right down here. Very good so far, yes, very clear. (Whole.)

Card VII.

1. My penis is all right too. (Lower center detail.)
2. Looks like they are kissing, doesn't it? Every inch of them as far as I can see. (Usual detail, top third.)
3. Looks something like me in here. (Inexact location.)

Card VIII.

1. These sides are red and down here is red too.
2. This is all right here to my throat; is clear. This is a very good one.

Card IX.

1. I haven't anything that is on that one; my shoulder blades are about here. (Green.)
2. And this head looks good (Orange) . . . but I don't know about that green part.

Card X.

1. This is red.
2. Down here is O. K. (Lower middle part.)

TABULATION OF PROTOCOL

R=18 F%=77% (14) P%=16% (3) W quality=(poor-good)
W= 4 F+%=14% (2) O%=55% (10) D quality=(poor-good)
D= 9 F-%=50% (7) A%= 6% (1) O quality=(poor)
d= 1+1

Confabulation=0 M=2 C=2 e=1 W:M=2:1
 Contamination=0 m=1 Cn=3 M:C=3:1
 Position =1 M quality=(good)
 A=1 Ana=8 (44%) Time =average
 Ad=0 Sex=3 Turning=(none)
 H=1 Bld=1+1 Attitude=(interested, pleased)
 Hd=3
 Piotrowski's signs: Cn, F+%, P%, Rpt, AP, Abs (Kelley)=6

FACTORS IN THE ANALYSIS

1. Reduction in number of reactions (only 18).
2. High form percentage (F) (over 50%).
3. Inordinate F—% (50 %).
4. Low F+% (only 14%).
5. Low popular percentage (less than 25%).
6. High O—% (55%).
7. Low animal percentage (7%).
8. Inordinate small detail.
9. Presence of positional answer.
10. General impoverished content.
11. Color denomination.
12. More marked deterioration in VIII, IX, X.
13. Presence of color in pure C value.
14. Presence of anxiety-type shading use.
15. Perseveration of anatomical answers.
16. Inability to shift attitude.
17. Idea that cards represent something real.
18. Phraseology repetition.
19. Lack of FM, FK, FC, reactions.
20. Presence of Piotrowski's signs to extent of significance.
21. Increase of Hd over H reactions.
22. Inordinate number of sex, bld, ana, reactions.
23. Presence of good human movement reactions.
24. Tendency in one instance to give reaction, though it was realized to be inadequate.

INTERPRETATION OF ANALYSIS

It is seen that the differential diagnosis is clearly between schizophrenia and a central nervous system organic disturbance, with or without psychosis. Psychoneurosis is ruled out because of overemphasis upon points found only in psychoses or central nervous system lesions, and because of lack of such psychoneurotic signs as high F+%, low O—%, and coartation of color and movement reactions.

Ruling out schizophrenia as the major diagnosis is somewhat more difficult. There is alternation of good and poor form, presence of poor quality original answers, positional reaction and color naming. However, we have presence of M to the extent of two; and it is of good quality. This has been very rare in previous examinations of schizophrenics who also show Cn and Pos. It is also noted that deteriorated schizophrenics rarely show the interest in the testing procedure that this patient indicated.

Although cases are found in the literature, the examinations conducted among patients of the neuropsychiatric service of the Fort Dix Station Hospital have not shown schizophrenics who feel that the cards represent something real.

These points and the fact that more than five of Piotrowski's signs of central nervous system injury were present in the protocol point to an organic basis of the disturbed personality picture presented by this patient.

Three of the important Piotrowski signs of organic cortical trauma have been present in all other central nervous system cases seen by the writer, e. g., R, T, and M;² these were absent in this record.

The absence of these abnormalities is of value in making the differential central nervous system diagnosis.

Human movement represents the most fully integrated tendencies of the individual. It is theoretically the last, or one of the last, determinants to vanish from a protocol. Human movement is found here in spite of the simultaneous presence of many abnormal signs. This seems to indicate that the cortical degeneration must not be so great as to penetrate too deeply into the basic personality.

While there is underproduction, it is not so great as usually found in the central nervous system cases.

Time, which seems to be of much importance in diagnosing central nervous system cases, is within normal limits in this record.

The disturbance, therefore, while it does attack the intellectual attributes, rests largely on the affective side.

It is known that arteriosclerotic patients with cerebral syndromes often maintain full mental elasticity except for occasional clouding periods. While this is sometimes true of cases of brain tumors and other cases of cortical lesions, those previously examined at the Station Hospital have indicated a change in the direction of dullness. This is also true of the syndrome of cerebral thrombosis.

Thus considering the age of the patient, the emotional lability, the retention of mental abilities, and the peculiarities mentioned here, the diagnosis of psychosis due to cerebral arteriosclerosis was made.

CLINICAL RECORD

October 24, 1941. The patient was admitted for routine examination for army discharge. An enlarged heart was found upon X-ray. No previous illnesses were reported, though the patient claims he was told he had high blood pressure in 1940.

November 11, 1941. Diagnosis made: hypertension, arterial; cardiac enlargement.

November 24, 1941. Temperature of 104°; no complaints.

November 25, 1941. Spinal fluids negative, neurologist examines the patient.

November 25, 1941. Rorschach examination administered.

November 26, 1941. Temperature is up to 102°.

November 27, 1941. The patient complains of pain in legs. No clinical evidence.

November 29, 1941. Temperature is normal.

November 30, 1941. Ward officer's diagnosis: cerebral and coronary arteriosclerosis.

Neurologist's examination: "In view of the fleeting numbness and tingling, fundal arteriosclerosis. Temperature, although neurologically the examination is negative, would indicate that the patient is demonstrating prodromal symptoms that may indicate a forthcoming cerebral accident on a cerebral arteriosclerotic basis. Recommend a Rorschach determination."

SUMMARY AND CONCLUSION

1. A case of Rorschach determination of psychosis due to arteriosclerosis on a cerebral basis has been presented. The diagnosis was made independently of the neuropsychiatrist and medical ward officer and confirmed by their diagnoses.

2. It is suggested that possible mathematical relationship of the determinants of the Rorschach method may exist that will lead to more exact diagnosis of central nervous system lesions.

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PSYCHOLOGY OF DEMENTIA PRAECOX

BY POMPEO MILICI, M. D.

Report of a Case

A large proportion of the personalities which develop the disease processes of dementia praecox demonstrate, from early ages, makeups defective in syntoid components, deficiencies in the instinctive life.

Almost from the start, such personalities are seen to be odd, peculiar, queer, "different." As a rule, they are uncommonly seclusive, shy, retiring, docile in the extreme. Deficient in social and altruistic feelings, they live only for themselves, they do not form strong attachments. They are not gregarious, they are not social. They feel inferior and uneasy. They cannot easily adapt themselves to new situations. They are not self-reliant, they lack initiative and determination, they are non-competitive, and they do not stand up for their rights. Sensitivity and stubbornness are strongly engrained; but, though ordinarily hard to guide and influence, these persons are often strikingly dependent on others, are vacillating, indecisive.

As a general rule, the disease symptomatology begins in early adolescence. Quite uniformly, the earliest personality changes are in the direction of increased introversion, an accentuation of the underlying schizoid makeup. There is a generalized and increasing narrowing or retraction of interests, a further flight from an environment already limited and narrow. As reality is being relinquished, a fantasy life is constructed to take its place. It is a "reality" much more to the person's liking and becomes increasingly demanding of his attention. Early, he recognizes his day-dreaming as wishful thinking, appreciates that his energies are leaving the normal path of reality interests to be dissipated by abnormal pursuit of dreamlike imagery. But, in the process of relinquishing reality, the person regresses. The fantasies and their emotional accompaniments enter the sphere of the unconscious, and insight is lost. In the unconscious, the fantasies are separated from their emotional accompaniments; and this gives rise to the so-called splitting of emotions which is characteristic of dementia praecox.

Only too often does the psychiatrist first see the person when the delusional material is no longer fantasy to him, but true, incontestable fact. Along with the usually unfavorable endogenous structure, there are such factors as the natural reserve and reticence of the dementia præcox patient, the tendency of his conflicts to be of an internal and very personal nature, and the repression and distortion to which they are subjected, characteristics which combine to form one of the principal reasons for the difficulty encountered in gaining an understanding of the inner mental behavior in schizophrenic subjects.

Occasionally, one has the good fortune to have under care a schizophrenic patient who is comparatively accessible to analysis. In such cases, the constitutional weakness toward dementia præcox is usually not too overwhelming, the personality makeup not too shut in. These people are eccentric, unstable, sensitive, suggestible, imaginative, fickle, untruthful. They do not really reach maturity but remain childish, incongruous in emotional reactions; and there is no stability of purpose. But they do attempt to keep in contact with the environment. Psychotic symptomatology necessitating hospitalization, may not occur until later in life than is the general rule. The reaction often is related to external difficulties; the conflicts are on the surface; the mechanisms at work are largely wish-fulfilling and indicate the psychogenic nature of the symptoms, which disappear with a dissolving of the troublesome problems.

Such patients are deserving of careful study, for they shed much light into the problem of deterioration and give access to an understanding of schizophrenia in general.

REPORT OF A CASE

Family and Personal History. Hellaane G. was admitted to Kings Park State Hospital on January 16, 1942. The paternal grandfather was a judge of a supreme court. His Dutch ancestors had entered the United States in 1648, were "well to do and very proud." His wife "would have looked down her nose at Queen Victoria." She called her husband "Augustus" and her son "William" in tones that sounded like an accusation. A diminutive or an endearment was as alien to her as profanity.

The maternal grandfather was a dashing, handsome Irishman. He "lived on his family" until he married into wealth. When his wife died, he married greater wealth. "He never did a day's work in his life." His second wife was a handsome, proud woman "who played the harp charmingly, no doubt to fit her to mingle with George Washington, God and a few Daughters of the American Revolution whom she might meet up yonder."

A grand-uncle was a mayor of New York City. Nearly all of the forebears had exceptional mental ability. There was a liberal sprinkling of soldiers and statesmen, lawyers, judges and clergymen.

H. G.'s father, an Episcopalian, inherited considerable wealth. He was dark and dapper, strikingly handsome, aristocratic. He was a brilliant lawyer, was convivial, a *bon vivant*, a clever after-dinner speaker. But he was irresponsible, weak in character, self-indulgent and "very susceptible to women."

Hellaane's mother, a Roman Catholic, was a flaming and really beautiful "red-head." She was friendly, charitable, but domineering. She exhibited a dogged "stick-to-it-iveness." However, her spirits were very volatile. One moment she would radiate cheer and happiness; the next, sadness would have her in its melancholy grip. She had a quick temper. "It was good policy for those about her to fathom her moods and act accordingly." Promises meant nothing to her but convenient stop-gaps. The truth was hers to use, or not, as she saw fit. She was barely 16 when she married. Her husband was 33.

H. G.'s parents traveled in Europe for three years following their marriage; and she, their only child, was born in Holland on September 29, 1900. The mother's condition during pregnancy was good; and, though the child weighed 12 pounds at birth, labor was spontaneous and easy. However, following delivery, the mother suffered "brain fever" for "several months." The family returned to the United States when H. G. was six weeks old and took up residence in Brooklyn. There followed a series of separations and reconciliations, with final divorce when H. G. was 12.

Hellaane's early development was normal. She had pertussis at the age of three, measles at four, mumps at five, all without known complication. She was an attractive child, was healthy and happy.

She was docile, tractable, obedient, affectionate but not demonstrative, a bit shy and retiring.

As a child, everyone with whom she came in contact "was certain of their own infallibility." She was "petted and indulged" but very strictly brought up. The first exhortation she received was that she must be a "little lady" and "indeed that is exactly what I was expected to be. Never a baby, still less a child, I must be a small but worthy replica of great-aunt Abby."

She was permitted to play with other children but little. She was rather patronizing toward them. She had hundreds of toys, and she was capable of amusing herself. She invented a twin brother who was a "naughty boy" and the scapegoat for all her faults.

When H. G. was about three and one-half years old, straddling the foot of the bed in her nurse's room one day, she received a pleasurable sensation. "From then on, this was my favorite pastime." Her mother could never bring herself to discuss this with her. An aunt, however, soon discovered what she was doing and "she literally raised the roof." Hellaane was threatened "with fire and brimstone." She was strapped into a highchair and was forced to witness the burning of a doll for which she felt a deep attachment. It had a terrible effect on her. She begged to be burned in the doll's place, but her aunt was implacable; and she carried out the process with cruel and deliberate slowness, lecturing thereafter to the effect that it was the little girl's depraved vileness that was responsible. This did not "cure" her, however, and in an attempt to break the habit, she was sent to a private Catholic convent boarding school.

From earliest childhood, the girl indulged in daydreaming. "Partly as a defense mechanism I invented stories which I told to myself while my aunts were engaged in haranguing me." Later, she liked to go to bed early that she might have more time to enjoy the meanderings of her fancy. "The stories I usually told myself were continued ones. I was, of course, the heroine, and I was wooed and won, but not too easily, by every character of world prominence. I might be separated from the hero of the moment but I knew we would be in each other's arms in chapter 24."

These daydreams, in which she found so much transitory satisfaction, were always voluntary. She could summon and dismiss them at will. However, "I began to live a separate life when I was 12 or 13 which became increasingly real as time went by. I became so engrossed in this daydreaming that I begrudged every moment I had to spend with reality." Sometimes she made a strong effort to abandon this practice, for she sensed that one day it might control her. But, "Every night, in bed, I told myself my stories and they became more real to me than my everyday life. I always indulged in these dreams. The more unhappy I was, the more satisfaction I derived from them."

H. G.'s mother and aunts belonged to the dictatorial school of child rearing. A thing became automatically right because they said it was. Their word, hasty and ill-considered though it might have been, was law. Her spinster aunts, who chiefly supervised her upbringing, were "naggers." They made as much "to do" over a spot on the tablecloth as over an act of disobedience. They had very rigid ideas of deportment, were very strict disciplinarians. When Hellaane attempted to reason with them, she was promptly silenced. "I resented this but was not strong enough to offer open opposition." She, nevertheless, clung tenaciously to her interpretations of justice and bitterly resented what she considered infringement upon it.

The child received long talks about developing her character from the time her masturbation was discovered. She was frequently told that she had a very "weak nature," that she had been born to original sin, that the devil was always at her side, seeking her spiritual destruction. She was told that she had a guardian angel. "I gathered that she was a poor weakling whom I must guard and cherish. I never liked her particularly as she was always there but withal a silent companion who cried when I sinned but never laughed when I played." H. G., said long prayers every night. "In my prayers I hoped that I would not have to stay in purgatory more than 40 years. I was daily turning over a new leaf and asking God to please let me live a little longer to atone for my wicked life. I pondered for hours on original sin and damnation and often I fell asleep picturing Hell and all its devils."

Whenever she was rebuked, "and that was often," an illustrious ancestor was held up for her emulation. "Thus I was discouraged before I began. How could I hope to cope with people who remembered and recited tales of a childhood unsullied by lie or tantrum?" She thought of herself, and she was a child much given to introspection, as "a poor stick," a blot on the family escutcheon.

The girl had very definite ideas of right and wrong. She had an innate and passionate love of truth for its own sake. "However, I realized early that to gain my own ends, finesse worked better than truthfulness." If a lie would serve her better than the truth, she told a lie. She developed great ability to lie herself out of unpleasant situations. She was, nevertheless, extremely conscientious and she tried repeatedly to be "good." "My conscience was an active, nay, an overworked one. I suffered keenly over my many lapses from grace."

"Life with mother was always lived at high tension." The mother's interests were manifold and changeable. She was restless, and they traveled, at home and abroad, "as though her life depended upon it." By the time H. G., at the age of 12, entered a private high school, she had attended 13 different boarding schools.

When Hellaane, at this age, first "fell in love," every boy who came within the scope of her acquaintance was examined and invariably found wanting. She was never allowed to play with boys. "If I happened to be in the kitchen with the cook when the butcher boy called, I was given a lecture on *noblesse oblige*." This made her self-conscious but did not lessen her interest in the opposite sex. She was quite attractive to boys and she managed to meet them in Christian Endeavor meetings or at a friend's home. She was inordinately vain. She fancied herself a heartbreaker. She wanted boys to like her; and as soon as they did, she lost interest in them. "I liked them immensely because they had the good sense to like me but my affections were seldom or never involved."

H. G.'s menses started when she was 12 years and nine months old. Her periods were very erratic; sometimes a year would pass without one. When she was 18 she was injured by a fall which necessitated an abdominal operation. From this time until six weeks after the birth of her first child, she had no menstrual period. Her

menses, thereafter, occurred regularly and were not even interrupted by pregnancy.

Hellaane's aunts always urged her not to marry. They tried in every way to foster a religious vocation. The girl was very devout, but a convent life did not appeal to her. From early childhood she had been heart-set on becoming a veterinarian. She loved animals in a very special way. She wanted to relieve their sufferings, to make laws to protect them. Here again, she met opposition and succumbed to it. Her aunts then insisted that she become a school teacher, and her college curriculum was mapped out accordingly.

At this time, H. G. had "a rather nice disposition," was always happy. She was interested in nearly everything, and was seldom bored. She enjoyed life immensely. She was not at all a worrying type, was rather inclined to leave her affairs to chance, to let tomorrow look out for itself. She was easy to get along with, was well liked, but she was never forward about making friends. Though outwardly rather phlegmatic, seldom displaying emotion, she was terribly hurt by criticism. She liked to please others and to have them show a warm regard for her. "I was not sufficiently strong-willed to offer opposition." She had a considerable reputation as a *raconteuse*, and she did not hesitate to embroider the truth if it would heighten the interest in her story. She was lazy, and she cared little for competitive sports. She enjoyed seeing others happy, especially persons in poorer circumstances. "I think that is why I became engaged to three men at the same time. I knew it would make them happy, and I counted on something turning up to extricate me gracefully. I did not like any of them well enough to marry." She was seldom thrifty, but occasionally she would save a few hundred dollars, and then would spend the money for something for her mother. As she grew older, she became more selfish and possessive. "I wanted a great many things and I usually got them." She liked to excel and would never engage in any enterprise in which she was not certain of being "tops." She suffered none of the disappointments of failure; success seemed to be a habit with her.

In college, she was brilliant but had scarcely any mathematical ability. "I was definitely not good at thinking out problems for myself." She was prominent in school theatricals. "I always won

the prizes, always had my dance programs filled." She continued her masturbatory activity. "These indulgences were not caused by thinking of any man. They were largely mechanical."

Toward the close of her college course, the girl fell seriously in love with a young artist. She decided to marry him, but he was not Catholic and there was so much opposition from her aunts because of this that she weakly gave up the struggle.

When, shortly afterward, she met the man who became her husband, she was bored, resentful and in a reckless frame of mind. "I liked him less than several others I knew, but he was a 'good Catholic,' so largely to spite my aunts, I married him." This was in April, 1921, within two months from the day of their acquaintance.

"I was so disgusted with his sexual approach that I wanted to leave him the morning after the marriage." Her mother, however, prevailed upon her to stay. "It is to my lasting regret that I did." The husband, aged 30, had been accustomed to a "pretty wild life." Only two weeks after marriage he spent the week-end with a former "friend." He delighted in describing their intimacies to Hellaane. "He was an incurable petticoat chaser." H. G. was very jealous of him in a possessive way. He displayed no natural jealousy whatsoever of her.

The husband was his wife's antithesis in every way. His mind was mathematical in the extreme. He was prosaic, unimaginative. The pair had such dissimilar backgrounds, their interests were so widely divergent, that they were alien to each other, "No young couple could have been more tragically unsuited." However, H. G. found comfort in her dreams. "Somehow he became invested with the aura of the daydreams; and he began to have, in my mind and only there, qualities and virtues and a few interesting vices of which he was entirely incapable."

In April, 1923, after the young woman had had three miscarriages, her first-born died at birth. "I began to dislike my husband actively, although he was considerate and sympathetic. I never lost the sense of resentment toward him, although I do not see how I could have held him blameworthy." From the hospital, H. G. went directly to her mother, refusing for five months to return to her husband.

During the months before her daughter was born, in June, 1924, "I made no preparations, spiritually or materially. I refused to purchase so much as a dozen diapers, although I had given away all the lovely clothes and furniture I had purchased before the other baby's birth with so much care and confidence. I deliberately put all thoughts and plans for the future in abeyance."

When the daughter was two and one-half years old, H. G. returned to live with her mother. Following a miscarriage, in April, 1927, she returned to her husband. When, almost at once, she again became pregnant, she attempted abortion. Unsuccessful, she left her husband's home, this time for six months.

"Before my son was born (January, 1928), I suffered terribly. I was extremely large and unwieldy. I was violently nauseated. Every night I suffered from the most torturing nightmares. I went through his birth, night after night, so that by the time he was born I had little strength for the actual ordeal, which was a dreadful one. I nearly died from sheer exhaustion. My son's life was also despaired of."

When H. G.'s son was two and one-half months old, she again separated from her husband. "I was nervous and ill for a long time following his birth. I seemed to regain my strength very slowly."

In 1929, she went through a year of "fighting in court" over the custody of her children. "My husband tried to frame me, and I was frightened of every footstep."

Hellaane's mother was very strict with her, and Hellaane, morbidly afraid of losing her children, feared to visit even her girl friends. "I missed my sexual life very much." She returned to the habit of masturbation which she had carried on desultorily. She had many sleepless nights, and she would often take cold douches or go on long walks. She had disturbing dreams of a sexual nature. However, she found emotional satisfaction in her children. She still had recourse to her daydreams. Together with books and an occasional attendance at the theater, they formed her chief diversions.

In 1930, Hellaane's mother, after five months of illness, died of a cancer of the breast at the age of 49. This was a great shock to the daughter, who was excessively attached to her. The loss of this

dominating personality was painful to Hellaane in the extreme; and she was unable, for a time, to make even the very simplest decisions. She lost a great deal of weight. "I was physically exhausted and very nervous. The telephone or any sudden noise made me jump, and if business forced me to ride on the elevated or subway I was so nervous I cried."

The mother's income stopped with her death. The daughter was left with a large house. She sold her cars, her diamonds and furs. She received a small weekly remittance from her husband. In 1932, she lost the home through foreclosure.

In 1933, when her son was five years old, her daughter nine, Hellaane returned to her husband. She made a sincere effort to hold the marriage together for the children's sake. But as time went on, it became increasingly difficult to continue living with her husband. "By its very nature the marriage could not have turned out other than a failure. It was a notable one." There were always other women in her husband's life. "Finally he met one he was determined to marry. He tried unsuccessfully, on many occasions, to frame me with a strange man." He offered \$25,000 to the wife to give him fraudulent grounds for divorce. She refused. "Life with him was a nightmare." He was cruel to the children. He threatened her with commitment and with deprivation of the children. He struck her frequently. On one occasion, while intoxicated, he fractured her nose. On another, he held her over the gas stove and turned on the burners. At last, after a stay of 14 months, H. G., with her children, left her husband permanently in August, 1934. "I very seldom thought of him after our separation." In July, 1937, she obtained a divorce.

For a brief period, the husband contributed toward her support. In 1936, she opened a dog kennel establishment and also boarded horses. In this, she was moderately successful for a time. During 1938, the family was on home relief.

In 1936, Hellaane received a proposal of marriage. "I tried to keep him out of my life. A less persistent suitor would have wandered away long ere this as I placed every obstacle in his way. His ardor was not dampened." This man was Scottish, not well educated, but of an upright, puritanical character, "kind, trustworthy and faithful." During 1940 and 1941 he boarded in H. G.'s home.

They became engaged. He kissed her often, but there was no further intimacy.

The woman's aunts strongly opposed the marriage, staged stormy scenes. Her children also violently opposed her remarriage. "I was afraid of marrying, mostly for fear that my children would stop loving me. To lose my children's love, seemed the worst that could befall me. I would have preferred death. Besides, if I married again, I would have had to give up my religion." She put the marriage off time and again. "I was of two minds. One day I would decide to get married in spite of opposition, the next day I would decide against it. I could not make up my mind one way or the other. The man was very much irked at my indecision. I felt fearful that he might meet someone who would take him on the rebound."

"Now comes the really terrible part." In September, 1940, H. G. met her ex-husband by appointment. He persuaded her to accompany him over the Labor Day week-end. He then threatened to inform her fiancé if she would not continue relations with him. "I did not go with him again despite the fact that my trip had been very pleasurable. I was motivated by two fears, the fear of pregnancy, the fear that I would lose my fiancé. As I really cared for him, I suffered keenly from a sense of unworthiness." At times she asked her fiancé to dissolve their romance. The fear that her ex-husband would tell him of their affair hung over her, although she had resolved "to brazen it out and deny it."

In November, 1941, Hellaane gave up her home and moved her family and her dog kennels to a friend's house. "It was not a wise move, as I soon found out that her husband was noisy and abusive to her. He was constantly complaining of the low rent I paid and demanding more." He was cruel to her dogs and she was anxious to move away; but, hampered by lack of money, she could not do so.

"At Christmas time I was in the very best of health. By the sixteenth of January, I was here." On Christmas day, H. G. had an animated discussion with her aunts who were very bitter upon this subject about the matter of changing her religion, should she remarry. On Christmas night, she and her daughter visited a recently widowed step-uncle. He was absent when they arrived, and they went to bed in a room adjoining his. About midnight, he re-

turned, very intoxicated, with a strange woman. Not realizing that they were observed, he and the woman undressed and started having sexual relations. Hellaane closed the door as soon as she could, without being discovered, and she and her daughter moved to another part of the house. They left before breakfast. "I was very much shocked and disgusted, and I felt very badly that my daughter should have witnessed such a performance."

On December 26, H. G. took a position as head waitress and parlor maid in a private home. "I had quite a few outstanding bills and I did not want to borrow money from my fiancé as I would have felt a certain compulsion to marry him if I did. I wanted to make a perfectly uninfluenced decision." She liked the work, but it entailed much standing. "My employer was very demanding and talked incessantly. I was tired and had little or no energy." She tried very hard to work, to please her employer, but she was unable to perform the "Herculean tasks" set her. She was so tired at night that she could not sleep. She read until 2 and 3 o'clock in the morning. She cried herself to sleep. On January 10, she was forced to give up this position. "I felt like a failure. I felt terribly frustrated as I wanted to earn enough money to send my daughter to college, and even one month's loss of employment mattered very much. I was in debt, and it looked as though my ambitions could never be realized. I wanted my children to be happy. I think I would have made any sacrifice to ensure it. I felt that through some shortcomings of mine, laziness, selfishness or poor management, I had brought all these troubles on myself and on my children. Finally it began to dawn on me that I never really had my own way, never really lived my own life and I determined to marry." The wedding date was set for the thirty-first of January, 1942.

Hellaane had reached a point of physical exhaustion where she was almost too weak to stand. All of her strength seemed to be leaving her through her wrists, which felt as if they had been slashed and were being slowly drained of blood.

Thinking was a painful effort. She found it difficult to concentrate and she could not arrange her thoughts in any sort of coherency. Reality and unreality became confused. Until then, she

had been capable of logical thinking. Now, her mind seemed to turn in upon itself. She became absorbed in her own problems. "Humanity did not exist for me. I felt no interest in my fellow man, much less my sister woman."

She was suspicious and apprehensive. The slightest noise set her teeth on edge. "Whenever I went downstairs the landlady called one of the men and told him to buy Pabulum." She thought this was a password for him to phone "some place." Every time she went out, she was conscious of being followed.

Food tasted very peculiarly to her, and she was in constant fear of being poisoned. She refused to eat any food prepared in the house and sent her daughter to a restaurant for meals. She would not even drink water.

On January 13, she was awakened by "a strong smell of coal gas." She could not arouse her daughter. She could not open the window in her son's room. She managed, with great difficulty, to drag him into her room. She feared that he was dead. She started downstairs to warn her landlady who had three small children. She suffered great distress in breathing, was weak and dizzy.

"There was a radio in my room. Even when it was not turned on I could hear men's voices." She heard threats muttered constantly from behind the wall where the radio stood. Two very low, monotonous, masculine voices, which she took to come from her landlady's husband and a boarder, were continuously mocking, unfriendly, threatening all sorts of sinister things to her, hideous happenings to her children. Often she was told that she would be committed, often that she would be executed as a Nazi spy or that her son would be found murdered and that she would be sent to the electric chair. "I felt agonizing anxiety for my children's safety. Each time I saw them I felt might be the last. I felt assured that my entire family was going to be wiped out."

The boarder had some phosphorus paint that H. G. knew about. The picture frames in her room, the footboard of the bed, seemed to her to be partly outlined with it.

Finally, she was so ill that she was unable to get out of bed at all. Even sitting up in bed seemed to be too much for her. She had a peculiar "all-gone" feeling of weakness in her stomach. She felt that she was dying and she felt great anxiety for her children's

safety after her death. She tried repeatedly to arise, but these efforts merely weakened her. When it was decided, at last, that she should go to the hospital "I was too exhausted to remonstrate."

At Kings Park State Hospital. The slightest physical exertion was almost beyond the patient's strength, exhausted her. Her throat felt as if it contained a rubber tube. Her chest felt tight and painful. Breathing was difficult, was often accompanied by wheezing and she thought that she had been made to swallow a whistle. The food gagged her, aroused extreme nausea, frequent vomiting. "Nothing tasted like itself." There were frequent unexpected tastes, such as that of vinegar in scrambled eggs. Meat and fish tasted like dead animals and snakes. She drank water sparingly. She was always conscious of a burning sensation in her stomach and she suffered at times from acute abdominal pains and cramps. H. G. suspected that strong laxatives, poisons were introduced into the food, believed that "dope" was blown through the keyhole into her room. "At night, my room was pervaded by the most noxious odors," disgusting "smells" of garbage, vomitus, feces, which led to active nausea. She believed that her hairpins were extracted with magnets, that horse manure and fish oil were smeared on her hair, and that cheese, onions and salt were smeared on her underclothing and sanitary pads. She thought that the mattress contained razor blades and sharp needles. She shivered continually, slept poorly.

Hellaane felt that her appearance was changed, that she was very repulsive, her hair turned gray, her cheeks drawn tightly. "I had a feeling that I was someone else, that my parents had deceived me, that I was not their child." Although familiar with the appearance of sea gulls, the gulls she saw on the grounds about her seemed strange and weird. She felt that the heads of other birds had been grafted on them. Some of the attendants seemed to have two mouths. Some of the female patients occasionally seemed to wear men's clothes. She often thought that one of the doctors was such a person, with a false mustache. "The other patients assumed the appearance of actors in a bad dream." She felt quite certain that there had been substitutions for her children.

The patient was in a confused state. She thought it was 1940 and that her children were the ages they were then. She remembered

events that had occurred since in a shadowy, unreal way, "I thought I had perhaps dreamed them in delirium. I felt that I had been here a long time in a comatose or semi-conscious state."

The woman could not control her thoughts or her thinking. She had no jurisdiction over her mind. Thoughts came and went, unbidden, unwanted, unpleasant, horrible, sad and often sordid.

Everything was significant. "I had to note the way people wore their hair, their clothes." Innocuous phrases seemed to her to be code messages. The remarks addressed to her seemed fraught with subtle enmity. Every question contained a hidden meaning. Every object about her carried some hostile significance. Newspaper articles she read from time to time bore personal reference to her. Whenever the radio was turned on, the program seemed deliberately tuned to spite her (she felt that the sounds emanated from the wall behind the radio). Her room often appeared to be rearranged; she thought that a *Poltergeist* had been at work. She felt that she was being spied upon through "peep holes," that candid camera pictures were taken of her. "I felt *gauche* and ridiculous."

The entire hospital, the whole universe seemed centered on doing her harm. "Everyone I saw bore a striking resemblance to someone I knew. I thought of people whom I had forgotten for years. They all seemed to bear me a grudge, and I more than suspected that the patients were these very people or their descendants and that they hated me and were ganged up against me." There did not seem to her to be one friendly face around her. She saw no one whose attitude was not hostile. Every hand seemed raised against her. She was convinced that all wished her harm.

The feeling that she was constantly under espionage was a harrowing one, made a nightmare of her waking hours. Her mind was in a turmoil. She felt that whatever she said would be held against her, that her every unconsidered act would be regarded as a reason for her permanent detention. She dreaded the other patients, constantly apprehended harm from them, never dared turn her back to them. To add to her misery, she could read the same frantic fear of her in their eyes that she felt must be gleaming in her own.

The patient had a feeling that she was waiting for some trivial clue which would set dire happenings in motion. "I would rack

my brain, for it seemed to me that I must have done someone a fearful injury to call forth such reprisal." She felt that she would be blamed for Carole Lombard's death and for the sinking of the *Normandie*. "I felt that there was something I should remember, that someone had died in my bed, someone who was very dear to me, also that there was some message or fact that I must remember in order to avert some terrible doings connected with my children and with the war." She felt that probably some suitor she had jilted had taken means of revenging himself on her. She felt that her son would be discovered murdered and that she would be held responsible. "I felt that I could have saved the Dutch royal family from some great danger which threatened them. I could not imagine what the danger was or where it might come from but I know that it was great."

The voices of the persons about her sounded shrill and raucous, jarred on her painfully, were almost unbearable. For three months, she thought that the pillow on her bed contained a cheap watch or time bomb. "I was conscious of a ticking at one end of the pillow and not the other." She thought that the building had been condemned and that she would be blown to bits. "I thought that I was destined to bring this about by touching an electric light switch." The verbal hallucinations, during this period, were always women's voices. She thought that there were high tension wires all about her and that she might be in a radio station. She thought that dictaphones were concealed in the closets and in the adjoining rooms. A snatch of song would be repeated over and over, or disjointed phrases, vulgarities, unfamiliar words. Often there were sexual topics, voices asking, "Do you believe in Lesbians? Were you a prostitute? Did you run a house?" Threats were whispered through the keyhole at night. Over and over, "You will never get out to marry the man you want." She thought that when a person was about to go home that she was fed weird concoctions to prevent this. Whenever she heard that a person had gone home, she thought that that was a euphemism for death. Whenever she saw a nurse leave the ward, she thought the nurse was going to be shot. She thought that new nurses of alien birth were continually being lured there and killed. She was certain that there was no going home "unless in a box." She was "told" that she would be tat-

tooded, infected with lues, receive a blood transfusion from a cancerous negro and that her children would be similarly treated at a school clinic. She was "told" that she was to be used for medical experiment.

The woman decided that she was in a "brain clinic" and that subjects were difficult to obtain for experimentation. She feared that her skull would be trephined. She was "told" that if a fortuitous accident did not occur, she would be operated upon and that "some slip-up or accident would occur." She was "told" that she was going to be tortured, that she was to die in horrible ways, to be buried alive, burned to death. "Whatever you do, you will be hanged and your daughter will be hanged. You will have to pay for your daughter's sins, and she'll have to pay for yours." She was "told" that she was diagnosed a drug addict. She had a very persistent horror of being poisoned and dying in agony, of being drugged and, while unconscious, locked in a closet and left to suffocate and die. She believed that the window bars were electrified, also that if she sat next to an open window she might be shot by a poisoned arrow or a shotgun. She believed that there was a lethal chamber on the floor above, and that some of the dormitories were "practice rooms." She could "hear" the dying anguish of cats, dogs and people "immured in the walls." She feared she would be murdered in her sleep. "I felt that I must surely be killed but that my murder would be stage-managed to look like an accident." She was "told" that neither of her children would grow up to amount to anything. She was "assured" that they were being, and would be, tortured and disgraced. She was "told" that they were dead and that buildings would have to be razed to find their bodies. Voices referred to her son as "your little rat." He had been kidnapped. He would surely die. He was being tortured (the tortures would be described in full). He was already dead. Her daughter was going to be drugged, to be attacked. She was going to grow up to be a prostitute.

H. G. shed copious tears. She was beset by a fear of blindness. The lights outside fascinated her for they seemed to come toward her and she could always "see" a young girl in their center. Every night, in a star, the patient could "see" a balloon in which there was a young man and a girl. "I always looked for my daughter

with great apprehension." She "saw" young girls made to ski off the roof at the point of a revolver. She would sit for long periods gazing fixedly at electric light bulbs wherein she "saw" fantastic happenings. "I could not resist looking. It was probably a form of self-hypnotism." She thought there were electric fans in the wheels of some of the cars parked outside and that these could draw people to their deaths. It seemed to her that there was a series of pulleys outside the windows on which were hooked "what looked like large laundry bags." She thought that a person was in each, that some were being used as rifle targets, that others contained young girls, trussed up and gagged, ready to be sent out to "unmentionable fates" at the mercy of negroes and gangsters and that still others concealed dead and dying persons who were to be sent to the morgue where they were callously buried "whether or not life was extinct." When laundry was returned to the ward, she thought the clothing came from the morgue, taken off the bodies of murdered nurses and patients. "It even had a charnel house smell." She "saw" huge colored women carrying baskets, thought white girls were concealed in these. She "saw" negroes and Scotsmen tied or nailed to trees, burning or dying of thirst.

The conformations of the trees and stones horrified her. One tree, in particular, appeared to her to have the impaled body of a boy near its top. H. G. could still make out this outline after she had made a considerable recovery. "It is probably a peculiar structure of the branches but I would be a great deal happier if someone would climb the tree and make sure . . . Although I realize what it is, it still bothers me. I think if I could disabuse my mind of this hallucination I would be completely cured." In the distance, she could "see" a graveyard; nearby was a pile of stones which looked like her daughter's body "even to a little blue plaid skirt she often wore five years ago." In the distance, she "saw" a small pond. Over and over, she would see a team of horses driven into it and disappearing.

Every day the patient "saw" a parade go around the building. This was led by an immense horse, about 20 times normal size. "I thought some young girl had to ride the large horse without any clothes on. I thought that my daughter would eventually have to ride like that." In this parade, she "saw" flags of all nations.

"I sometimes thought that this was part of the World's Fair and that it was to be blown up. I thought that fireworks were to be set off at great hazard to me." There were all sorts of animals, many starved horses. She also "saw" crowded, flimsy balconies which collapsed as the spectators watched the parade, killing them all. "I often thought that this was a sort of winter quarters for a circus and that people were changed into freaks." She thought that there were many animals in the cellars and that there, snake and elephant skin was being grafted on people, that girls were being turned into turtles. She thought that one of her vertebrae had been rounded somehow and that she was to be a contortionist. (For a time she turned somersaults over the foot of her bed.)

She also thought that she might be in a coastguard station, that the building might be a concentration camp for suspected aliens, and that she was in the hands of Nazi sympathizers or of Americans who thought she was a Nazi. Sometimes she thought she was on an island where people with contagious diseases were segregated and that all were to be destroyed. She thought that this might be an island where garbage was deposited from scows and that gradually the water was being allowed to encroach upon it and that finally it was to disappear altogether.

In the signs on the ward doors (ward number, "Do not bang the door"), in other signs throughout the building, in the alphabetical games played by other patients, she misread, "Your little rat is in jail." "Did you put him on the spot?" "Where were you when Legs was shot?" "Esposito is here."

Every night, for over three months, H. G. saw "shadowgraphs," "pictographs," "phantographs." These were clear, well-defined, pictures, about three feet by five feet in size, always in color, always shown in the same sequence, "exactly like the magic lantern slides my cousin had 25 years ago," and usually seen on the wall at the foot of her bed. For several days, "the pictures would be repeated over and over again, *ad nauseam*. Then for no apparent reason, they would change." Peculiarly, she could not see these pictures if the window shade was drawn. "I thought a projector was held outside the window and the pictures thus projected on the wall."

The "shadowgraphs" were gruesome, horrible and frightening, depicting persons being anesthetized, in restraint or asleep threatened by nurses with bottles of acid, bodies being wrapped in army blankets, horrible looking hunchbacks winding bodies with tape, gangsters, little boys being tortured, dead bodies, burials at sea, girls in parked cars and pursued on lonely roads, pornographic scenes.

"My mind was tormented constantly with phantographs of my children undergoing torture which always culminated in death." She "saw" scenes of her children being wedged into auto trunks, to be taken away and harmed. There were many pictures of auto wrecks, head-on collisions of all sorts, in which her children were always involved. There were frequent scenes of fires, mostly forest fires. The children would always be trapped in these. As they were playing around a bonfire, acids or bullets would explode, burning them horribly and blinding them. She "saw" scenes of her children, their mouths and nostrils stuffed with dry plaster, water then poured on. There were scenes of shallow graves into which her children were placed, face down, as dirt was forced into their mouths, usually by a powerful negro. They were "seen" being bricked into walls. There were scenes of drowned persons, bodies bloated, always her children, and scenes of the morgue with people entering to identify the horribly mutilated bodies of her children.

"I really love my son better than my daughter, yet the tortures he went through were twice as intense." The son's hand would be "seen" held against a red hot stove "exactly like the old laundry stove we used to have." Boys would be holding him as acid was thrown into his face and he was beaten unmercifully. The soles of his feet would be burned. Working in a defense plant, he would be pushed into machinery, held to have a hand cut off. He would be "seen" thrown out of freight cars. There were scenes of airplanes falling, and the son, a stowaway, was always badly hurt. He would be "seen" chained, starved, his tongue parched with thirst. As he was walking through the woods, the muzzle of a shotgun would be apparent, ready to shoot him; and then would follow a scene of the flashing of the gun and the killing. Blindfolded, he would be shot as a spy. Falling to the tracks in the subway, he would be electrocuted by the third rail. Running from the police

he would encounter railroad or high tension radio wires; and, sprawled grotesquely, sparks flying from his body, life would slowly leave his convulsed form.

In these "shadowgraphs" she "saw" her daughter scrubbing steps or working as a waitress "in sloppy places." She would be "somewhere" taking off her clothes, and young men and negroes would be observing her. "A large negro who stood with a large club. A young girl would walk toward him without her seeing him and he would lie in wait to strike her. There were pictures of this same young girl who bore a striking likeness to my daughter, lying in bed attended by a negro dressed as a woman." Her daughter, trapped by a powerful negro, was being dragged out of a car near the woods. She would be "seen" in a small room, lying on a bed, crying, with blood on her face. She would be illegitimately pregnant; babies would be thrown from roofs. She "saw" pictures of the "black mass" and other sacrilegious orgies. "The celebrants seemed to be dressed properly in front, but their ceremonial robes were cut out in back in a disgusting way." The ceremony would be performed on a young girl's body, lying bound on a marble altar. Or, she would be in a "sort of a coffin or in a mummy case," an immense slab of stone descending slowly to crush her. At the close, she would be stabbed between the breasts.

II. G. "saw" scenes of herself in a dance hall dancing with Orientals and negroes. Pictures of her in an intoxicated condition would appear in the newspapers, and these would be shown to her father. Her fiancé, shown pictures of her, would react in a disgusted manner. She would be in prison, threatened by keepers about to attack her sexually. She would "see" herself in an operating theater, undergoing serious surgery. Blind, she was being pushed off a height. She was being electrocuted for the murder of her son.

There were some "shadowgraphs" of her fiancé, depicting him "breaking up a wall to get at a body." There were pictures of the gallows and "someone wearing Scotch plaid" being decapitated. He was "seen" falling off buildings, or someone would saw through a rope and he would fall from a scaffold.

The patient tried very hard to marshal her thoughts from the chaos which engulfed them. She made every effort to distinguish

between reality and unreality. She made various tests. When she would put her fingers in her ears, she no longer heard the voices. "I tried every trick I knew of to convince myself that the shadowgraphs were figments of my imagination." She closed her eyes, buried her head under the bedclothes, looked in other directions, thought of other things. She would count to 100 between each test or would recite poetry "in order to break off the particular line of thought induced by the pictures or the voices." It was useless. Always, when she again opened her eyes, the "shadowgraphs" would reappear. Sometimes the same picture would be there or one leading in thought content from the preceding one. She felt that the tests she had applied were satisfactory and that she had proved that the voices and pictures were real.

Urged by an inner compulsion, she had to watch the "shadowgraphs." "I hated to look at them." She feared lest she miss some significant scene which would contain a warning of a fate she might avoid through being forewarned, which might picture a way of escape. For a time, she was determined to resist with all her strength, to make things more difficult for her tormentors, to escape if possible. She felt that extreme cunning was needed. "But soon I had a hopeless feeling that I could never accomplish this, that I could not save my children."

She suffered agonies of remorse. "I was a prey to remorse and recrimination. Every little selfish act of my past life came back to haunt me." Small unkindnesses, thoughtless acts, trivial oversights were magnified out of all proportion. "Every night I thought that a chair was wheeled into my room and that someone very inimical to me, muffled up to the eyes, which were very penetrating, sat and watched me."

She was utterly devoid of hope, was sunk in a morass of despair, lost in a hopeless maze of torture and pain. She rejected all religion. She constantly wished she could gain a painless death for her children to save them from their tortures. Her sufferings were intense in the extreme. She did not want to live and endure them. "I tried every night to bring myself to the point where I would be brave enough to kill myself, as I felt that this was what was wanted of me." Never once did she really wish to die, but she anticipated

and feared a horrible death. So convinced was she that death was inevitable that she would have welcomed a swift means of suicide.

Until early May, 1942, H. G. was seclusive, inactive, subdued, pre-occupied, perplexed. Whenever interviewed, she showed no spontaneity, questions had to be repeated, and little could be obtained from her. "I was always anxious to be alone. I tried to make myself as inconspicuous as possible. I did not want to see people. I doubted whether the doctors were really doctors. Three months went by before I regarded them in the light of anything but an enemy. I would have given anything to secure a few moments privacy." She then started to show improvement. "I decided definitely to go through with the marriage." The hallucinatory activity gradually subsided. She began to talk more and more freely.

For several weeks, she was far from having insight. She showed a heightened suspicion, with misinterpretation of environmental occurrences. She insisted, though less and less firmly, as she unfolded the account of her experiences, that these were incontrovertible realities. She felt that very possibly her ex-husband was the cause of the situation in which she found herself. She was certain, at any rate, that some sort of plot had been formulated against her, that "everything was proceeding according to plan" and that her children were still in danger.

H. G.'s daughter then announced to her her engagement and intention to marry in the near future. The son, shortly, made known that he had received a scholarship and was departing for schooling up-State. The patient's improvement now proceeded by leaps and bounds. Before the end of May, she was in a recovered mental state.

"My mind was in a very confused state owing to anxiety over my children's welfare and future. I was, and am, devoted to my children. I have gone hungry that they might eat, inadequately clothed and shod that they might have warm clothes and strong shoes.

"It is little short of terrifying to realize that along with one's familiar ego lives an alter ego which can be the epitome of malignancy. I feel heartily ashamed of the deep-grained selfishness, disregard for the rights and lives of others and what is practically mental murder. When faced with a problem, in order to go through

with the marriage, I killed my children off blithely. The methods I used were brutal and fiendish. Their agonies were long drawn out and excruciating.

"Calling the events of my illness to mind is increasingly painful. I am getting so I abhor it. I get a feeling almost of nausea when I recall the hallucinations. I want to forget, and I think nature will assist me.

"I feel perfectly recovered now. I feel stronger and more rested than I have in years. I now have a new feeling of mental competence. I feel able to make and abide by decisions. I feel capable of tackling any problem that life may offer. I think my mental capacity has broadened and while the old adage may still hold, 'You can't teach an old dog new tricks,' I feel like a new dog."

On June 21, 1942, the patient, desirous of immediate marriage, was discharged from the hospital, condition, "recovered."

CONCLUSION

Hellaane G. started to give evidence, in infancy, of schizoid traits and tendencies which became increasingly established under the influence of her upbringing. While undoubtedly she can be said to have manifested dementia præcox reactions, at least from the time of puberty, she was nevertheless able, with the exception of periods during times of great stress, to get along fairly well until shortly before her commitment. Despite her obvious inability to meet reality squarely, she, nevertheless, continued, probably chiefly because of her children, to maintain contact with it; and, as long as she was able to feel herself to be of importance to her children, she was on safe ground.

For some time preceding her commitment, H. G. had been debating the problem, very important to her, of remarriage. Her aunts objected to this, but the important objection came from her children. Though desirous of going on with the marriage, she sought every possible road of escape from the associated possibility of losing her children's love.

When her dog kennel business went badly and debts mounted, she tried desperately to go on by accepting a position in a field foreign to her. Her failure in this was catastrophic in its effect. There was now no outlet left her but to marry. The threat of loss

of her children's affections became acute, and the psychosis, with attempt to dissolve the inimical situation, quickly developed. Hellaane could defy her aunts but not her children; and, so because of the unsurmountable obstacle that they represented, she "tortured" them and "killed them off," not however without having herself to suffer for her sadism.

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CONVULSIONS FOLLOWING ABRUPT WITHDRAWAL OF BARBITURATE: CLINICAL AND ELECTRO- ENCEPHALOGRAPHIC STUDIES

BY S. R. BROWNSTEIN, M. D., AND B. L. PACELLA, M. D.

INTRODUCTION

There are frequent references in the literature to the occurrence of convulsive seizures following abrupt withdrawal of sedative medication in individuals who have taken large doses for prolonged periods of time and who have no previous history of convulsive phenomena. H. S. Dunning,¹ in 1940, summarized the literature and added six cases of his own in which convulsions followed abrupt withdrawal of sedative medication. Kalinowsky² has more recently reported a number of nonepileptic, chronically disturbed patients at Pilgrim State Hospital who were treated with large doses of sodium barbital for years, and who—several days after withdrawal of the medication—had convulsions; for three years subsequent to these attacks, no further seizures occurred. The writers are reporting a case of barbiturate habituation in which a convulsion occurred on the third or fourth day each time the drug was withdrawn. In addition to the clinical studies, electroencephalographic studies were carried out, which, to the writers' knowledge, have not been reported previously in the literature in similar cases.

CASE HISTORY

J. D., a 49-year-old white woman, was admitted to the Psychiatric Institute, July 16, 1941, with a history of barbiturate habituation since 1929 and the occurrence of convulsive seizures for the first time in her life following the abrupt withdrawal of the drug in 1940.

She began to take sedative medication shortly after the death of her husband, a physician, who died as a result of a fall in 1928. Shortly thereafter, she contracted pneumonia and was confined to a hospital for several months. Six months later, she underwent a cholecystotomy. Following her return home, she was unable to sleep, and morphine was given for a period of three weeks. She then took allonal, in doses up to 12 tablets daily (36 gr.), to over-

come insomnia due to anxieties arising out of a fear of darkness and of smothering. She continued to use allonal in large dosages until 1939, when she replaced it by nembutal. She began with small amounts, at first 3 to 6 gr., but gradually increased it to daily dosages of 27 grains. Before retiring she would take 9 to 12 gr., but even then she would sleep for only two or three hours. In the spring of 1940, she stopped taking nembutal because she could no longer afford it. Four days later she had a generalized epileptiform convulsion, with foaming, cyanosis, tonic and clonic convulsions and amnesia for the event. She resumed the medication soon after this attack and continued with it until the fall of 1940 when she again stopped. As before, she had a generalized epileptiform seizure four days following withdrawal. Following this seizure, however, she did not take sedatives for three months. In November, 1940, because of pain in the gall bladder region, she was advised to take some nembutal. She did so, but after a few months, made several attempts to discontinue the medication. Each time she ceased abruptly to take the nembutal, a generalized convulsion occurred three to four days later. Because of the occurrence of the convulsions, hospitalization was suggested; and she entered the hospital, approximately one week after her last seizure, immediately following which she had again resumed nembutal sedation.

According to her son, a definite personality change occurred about three years prior to admission. She began to neglect her household, became asocial, and felt that her judgment was poor. There was no obvious memory loss, but she spoke frequently about her past life and was prone to exaggerate or distort a number of incidents which had occurred years ago.

PHYSICAL EXAMINATION

Physical examination revealed a tall, well-nourished, gray-haired, attractive, white, middle-aged woman. There was no dyspnoea or cyanosis. There were several healing lacerations of the face at the outer angle of the left orbit as the result of injuries suffered during one of her convulsions. The heart was not enlarged, sounds were regular and of good quality. Lungs were clear; blood pressure 120/80. Abdominal examination, including a pelvic ex-

amination, revealed no pathological findings. The pupils were equal, regular, reacted to light, accommodation and convergence. There was horizontal nystagmus on lateral gaze; the fundi showed slight arteriolar sclerosis; and visual fields were grossly normal. The corneal and pharyngeal reflexes were sluggish but present. The tongue was tremulous; a coarse, irregular tremor of the outstretched fingers was present. There was no evidence of motor weakness. Reflexes in the upper extremities were active and equal, but the abdominal reflexes were not elicited. (This was probably due to poor muscle tone and post-operative scarrings.) The knee jerks were present, but equally diminished; and the ankle jerks were very sluggish bilaterally. Plantar reflexes were flexor bilaterally. There were no objective manifestations of sensory disturbances. Vibration and position sense were good. There was no anomia or astereognosis.

MENTAL STATUS

The patient was neatly dressed on admission, but tense and apprehensive. She spoke spontaneously, coherently and relevantly, and there was logical progression of ideas. Some traces of irritability and suspiciousness were exhibited during the initial interview. Mood and affect were appropriate and colored by slight depression. Many guilt feelings were expressed because of mismanagement of funds. Several unsubstantiated statements concerning forging of checks for large amounts of money were made about friends and her husband. Hallucinations could not be definitely ascertained and were denied by the patient. Orientation for time, place and person was good, except for one instance several weeks after admission when she appeared to be temporarily disoriented for time. Memory for recent and remote events was good on testing, but later she could not recall the location of the college she had attended.

LABORATORY FINDINGS

Urinalysis, complete blood count and blood chemistry were within normal limits. The blood Wassermann was negative. X-rays of the chest, lumbosacral spine and gastrointestinal series revealed no pathology, but a gall bladder series was interpreted as being borderline normal. A flat plate of the skull revealed a hyperostosis

of the inner table of the frontal bone. The basal metabolic rate was —22.2 per cent soon after admission.

An electroencephalogram taken two days following admission, revealed the presence of almost continuous high amplitude, 7 cycle per second waves over the parietal and occipital regions bilaterally, with some irregularity in the wave forms, particularly over the occipital leads. (Figure 1.) Hyperventilation did not appreciably alter the pattern. In the light of the clinical history, these findings were interpreted as indicating abnormal electrocortical activity

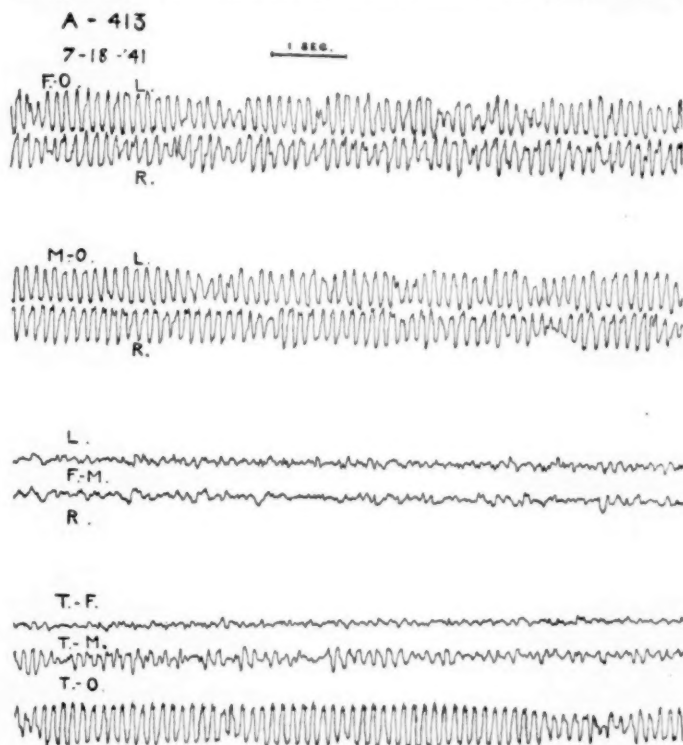


Figure 1. This record illustrates an almost continuous high amplitude activity of 7 to 7.5 cycle per second waves over the parietal and occipital regions particularly, with much lower amplitude and irregular activity over the frontal areas bilaterally. This record was considered to be diffusely abnormal, and consistent with some generalized disturbance involving the cortex. In this case, the pattern apparently was the result of long-continued use of barbiturate medication.

consistent with a toxic disturbance, and not particularly suggestive of a convulsive disorder.

SUBSEQUENT COURSE IN THE HOSPITAL

Beginning with the day of admission, barbiturate sedation was gradually diminished, so that by the end of the first week all sedatives had finally been withdrawn; and no untoward symptoms or epileptic manifestations had been exhibited. The patient subsequently got along very well without any further medication, and showed progressive clinical improvement under an intensive psychotherapeutic program. Electroencephalograms were taken at weekly intervals; and, by August 1, some diminution in abnormal activity on the left side was noted, while little change was noted on the right. One month after admission, on August 15, the electroencephalogram revealed a definite decrease in amplitude bilaterally, more so on the right than on the left side, with the frequency rate of the waves varying from 7 to 8.5 cycles per second, with the 8.5 cycle per second waves predominating. The record was interpreted as exhibiting less electrocortical dysfunction than previously, as indicated by (1) the diminution of the very high amplitude, (2) increase in the frequency rate of the 7 cycle per second rhythm to 8 and 8.5 cycles per second, and (3) a decrease in irregularity of the pattern. The electrocortical pattern continued to show gradual "improvement," and on September 19, was interpreted as being a borderline normal record, with a high incidence of 8.5 cycle per second rhythm.

Attempts to reproduce convulsions by use of alkalis and hydration were unsuccessful. The electrocortical pattern did not seem to be particularly affected by these attempts, but merely continued to show gradually diminishing irregularity.

Coincident with the improvement in the electrocortical pattern, was an improvement in the clinical picture of the patient, with disappearance of delusional formation, and appreciable improvement of memory. A neurological examination on August 4 was essentially negative.

An electroencephalogram was repeated again on October 16, immediately before, and, for varying periods during the day, subsequent to oral administration of 0.2 g. nembutal. No change in the

electrocortical pattern was observed as a result of the oral administration of the drug; and, in fact, it continued to show an almost normal pattern. (Figure 2.)

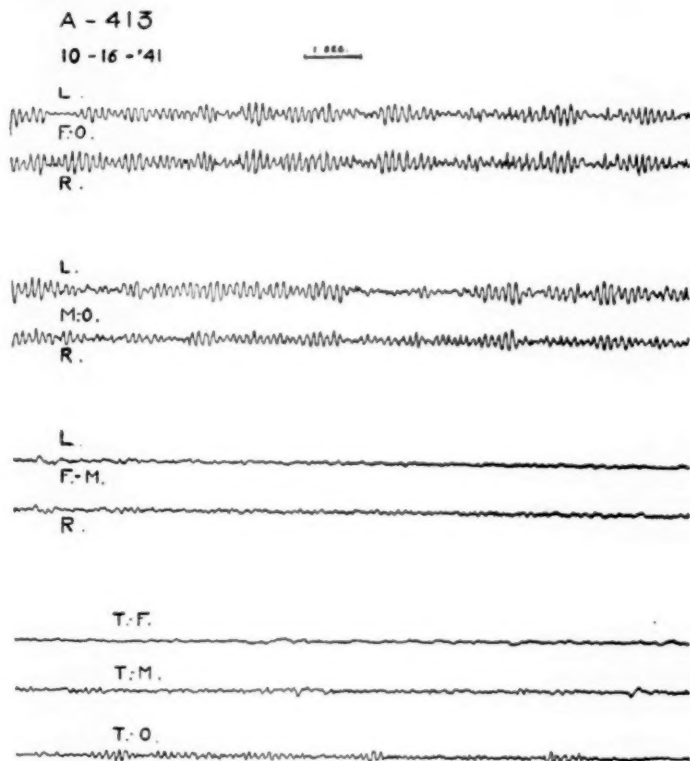


Figure 2. This record taken approximately two months after the record illustrated in Figure 1, shows well formed 8 to 8.5 cycle per second alpha rhythm bilaterally with a slight relative diminution in the amplitude of the waves in the right motor occipital lead, as compared with the left. In view of the occasional notching of the waves that appeared, plus the easy irregularities in wave forms produced by hyperventilation, the record was considered to be borderline normal. Subsequent records continued to show this same pattern.

A pneumoencephalogram under barbiturate and paraldehyde sedation was performed on October 18; 112 cc. of spinal fluid was removed and 104 cc. of oxygen introduced into the subarachnoid space. Examination of the spinal fluid did not reveal any signifi-

cant findings. The pneumoencephalogram was interpreted by Dr. Cornelius Dyke of the New York Neurological Institute as showing some cortical atrophy that was slightly more marked on the right.

On November 17, electroencephalograms were again repeated prior to and at varying periods subsequent to intravenous injections of sodium pentobarbital .5 gms. The preinjection record showed a prominent 8.5 to 9 cycles per second alpha rhythm of slightly greater amplitude on the left side than on the right side. There still appeared to be slight irregularity in the wave forms, consisting particularly of notching and occasional spiking. Shortly after the injection of sodium pentobarbital the patient entered a light sleep from which she could easily be roused, and the resulting electroencephalographic record was similar in some respects to the patterns described by other investigators regarding electroencephalographic changes associated with sodium pentobarbital effects.³ At first, immediately following the injection, there was an increase in the amplitude of the alpha waves; and this was soon followed by the appearance of random occasional slow potentials from both sides of the head as the patient remained in light sleep. Fast activity, particularly 13 to 16 cycles per second activity, often noted in cases during the early stages of pentobarbital narcosis, was not noted in this instance. The record returned to the preinjection state approximately six hours after injection of the drug, after the patient had been up and about the ward for several hours. Electroencephalograms repeated the following day showed no essential change in the pattern, except that the amplitude of the waves appeared to be slightly increased and there was a suggestion of some increase in the notching of the waves.

Injection of sodium pentobarbital intravenously in three control patients, with simultaneous and subsequent electroencephalographic recordings exhibited similar changes to that noted in the case under consideration, except that 13 to 16 cycles per second rhythm appeared in these cases coincidental with the increase in amplitude of the alpha waves.

The final electroencephalogram was taken on December 3, 1941, the date of the woman's discharge from the hospital. The record was substantially no different from that previously taken and still exhibited a very high incidence of alpha activity with some notch-

ing and spiking of the waves and a slightly greater amplitude of activity on the left side as compared with the right. This record could not be considered as definitely abnormal in spite of the slight irregularities noted, and was interpreted as still being a borderline normal pattern.

The patient clinically had shown substantial improvement during the last few months of her hospital stay; the underlying factors, producing fears of darkness and of smothering with subsequent sleeplessness, were uncovered through intensive psychotherapy; and on the date of discharge, the patient was considered much improved.

Up to six months after leaving the hospital, and one year after her last convulsion (which had occurred one week prior to her hospitalization), the patient has had no further epileptic manifestations. Her clinical psychiatric picture remains as well as upon discharge from the hospital, and she has not employed any sedative drugs. She is moderately active socially and is engaged in a voluntary capacity as a nurse's aid as her contribution to the war effort.

COMMENT

Some experimental evidence exists which indicates that convulsive seizures may follow withdrawal of barbiturate medication which had been previously administered to animals for long periods of time. Seever and Tatum⁴ administered sodium barbital to six dogs in doses "comparable to those taken by human addicts" over a period of 3.7 to 4.5 months continuously and observed generalized seizures in the animals two to four days following complete withdrawal of the drug.

In the human cases reported by Dunning,¹ convulsions occurred from two to eight days after the drug had been stopped. In the writers' own case, an interval of three to four days elapsed between withdrawal and convulsions. The absence of convulsions after admission to the hospital was attributed in part to the fact that withdrawal of the drug was gradual.

Convulsions have been reported also as occurring after sudden withdrawal of sedative drugs other than barbiturates, such as paraldehyde,⁵ alcohol,⁶ and morphine.⁷ Interestingly enough, however, they have not been reportedly observed after abrupt cessation

of bromide medication in patients subjected to long-continued use of the drug and exhibiting toxic symptoms. This raises an interesting question as to the actual physiological basis for the development of seizures following sudden withdrawal of the drugs mentioned. It is possible that the rate of excretion of the various drugs may bear some relationship to the onset of convulsive phenomena in these cases; but, of course, this does not explain why convulsions occurred at all.

Electroencephalographic studies carried out in the writers' patient exhibited a few interesting features. When the patient was first admitted to the hospital with a history of convulsive attacks, an electroencephalogram was performed to determine whether the patient had a "convulsive pattern" or a localized lesion which might account for the seizures. The pattern obtained, however, was rather peculiar, in that it exhibited almost continuous 7 cycle per second waves of high amplitude over the parietal and occipital regions of the brain. Hyperventilation did not result in any serial slower waves, or affect the pattern appreciably. Since the pattern noted in this case did not resemble records which had been noted in adult epileptic patients, and since there was no clinical evidence of any increased intracranial pressure, or of localized organic central nervous system disease, which might conceivably have produced a similar pattern, it was believed that the electroencephalogram was evidence of a diffuse toxic process involving the brain, rather than an indication of a "constitutional" convulsive disorder or of a "latent convulsive tendency." This original impression apparently was borne out by subsequent records in which the pattern gradually returned to an almost normal state, after gradual withdrawal of barbiturate medication, and concomitant with gradual improvement in the clinical psychiatric picture. The last electroencephalographic tracing taken in the hospital, several months after the first recording, exhibited only minimal disturbances and may be classified as a borderline normal record. At this time, the patient's clinical picture was one of marked improvement.

It is believed, therefore, that the patient did not have, at least electroencephalographically, a "latent convulsive tendency" which was brought out by some disturbance in the internal somatic or external environment. It seems that some other explanation for the

development of seizures in this case, and possibly in other similar cases, would have to be forthcoming. In this connection, one might mention the severe and frequent seizures which may result from abrupt withdrawal of barbiturates in epileptics, at times resulting in status epilepticus. It is quite possible that one or more of the factors which play a rôle in barbiturate withdrawal seizures in nonepileptics, play a similar rôle in the development of withdrawal symptoms in the epileptic cases. This would be in addition, of course, to those factors which have been attributed to the "epileptic constitution," and its often associated "paroxysmal cerebral dysrhythmia." Certainly, additional experimental and clinical investigations are necessary before any valid explanation may be proposed to explain the development of postwithdrawal seizures, either in epileptics or nonepileptics. The electroencephalogram may be an important aid in the formulation of such explanation.

CONCLUSIONS

1. A case of a 49-year-old female who had been habituated to barbiturates for some period is presented in which convulsive seizures resulted following abrupt cessation of therapy. After gradual withdrawal of the drug, no further seizures resulted.

2. Electroencephalograms were taken at the time of hospitalization when marked abnormality was noted, and repeat-records were taken over a period of months with gradual diminution in the severity of the abnormality to a point where the record exhibited almost a normal pattern. These latter findings were associated with concomitant improvement in the clinical psychiatric picture.

3. A convulsive pattern was not clearly evidenced in the records at any time, and it is presumed, therefore, that a "constitutional convulsive tendency" did not exist in the patient and could not have been primarily responsible, therefore, for the development of the seizures.

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AN INTERPRETATION OF ANTI-SEMITISM

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I

The problem of anti-Semitism is rather complex; it has numerous issues and may be viewed from various angles. To add to its complexity, none of the aspects is too well known and the little-known is further complicated by the individual writer who, in his account, may succumb to his preferences and prejudices. One way of remaining objective in an inquiry of this type is to use the historical method of study which the writer has followed.

The problem is obviously a challenge to any socially-minded person, especially to the psychiatrist who deals with the ills of human nature and interpersonal relationships. Yet, there is a surprising lack of psychiatric investigation. The problem has been on the writer's mind for a considerable time. Its discussion has apparently matured now because of the urge to communicate reflections on the problem to others.

To begin with, one may ask what is meant by anti-Semitism? As usual terms are used indiscriminately. In this instance, we do not mean the Semitic peoples as a whole, but mean specifically the Jews. As the term stands, it may be defined as a religious, political and social agitation against the Jews. The term can be applied to activities of certain persons or groups who act against the Jews in an almost professional manner for a definite purpose and with an express aim. In such application, anti-Semitism would cover only a conscious attitude. It is thought, however, by modern psychologists that there is an unconscious element which accompanies our thoughts, acts and feelings. It is this unconscious element behind a movement which needs explanation if one is to understand the ability on the part of agitators to inflame others. The writer believes that the deeper layers projected in anti-Semitic agitation may well be called "Judophobia," which denotes hatred of and fear of Jews.

To ascertain the forces behind this hatred and fear, it is necessary to account for its background. We have to give a historical account of the Hebrew development in space and time. Moreover,

it is necessary further to evaluate certain aspects of the evolution of civilization in general, since neither the Jews nor the Gentiles developed in isolation, as if under laboratory conditions.

Clinically speaking, an analysis of the problem of anti-Semitism would consist of an analysis of the symptoms, that is, of the complaints against the Jew, as projected upon and mirrored by his personality (family history, past life and present condition). The aspects of the evolution of civilization in general which may have bearing upon the problem are related to the evolution of certain phases of organization of society, as shall be seen later.

To account for the many complaints and to give an adequate historical account of the Hebrew background is rather a large order, not possible to fulfill in a paper of this kind. Therefore, only a few salient points on the subject will be given, in order to make the presentation of the writer's theory sufficiently intelligible.

II

The origin of the Jews in space may be referred to a rugged bit of land, apparently very fertile, located in the Tigris-Euphrates valley. It may be assumed that the location was remarkable for its climatic as well as other unknown qualities, since it is this neighborhood that is believed to have given birth to civilization in general—the Sumerian.

The location served from time immemorial as a highway between rival civilizations and empires. The small area of their final location is Mesopotamia which kept in check the growth of its population, only the fittest surviving until such times as infiltration into other countries became necessary and possible. The hardships of that rugged land probably developed in its people the traits of sturdiness, tenacity and perseverance. It is of note that the Jew became very early conscious of the importance of mental health. This consciousness culminated in an unparalleled development of imagination, as demonstrated in the Jewish discovery of the personality of the invisible God. The God-idea was immediately nationalized, which led to a national-political period of life, until the destruction of the Temple in 70 A. D. This period may be identified with the "family history" and "childhood" of the Jews.

After the loss of the homeland, the Jews, to preserve their integrity, surrounded themselves with a spiritual wall of religion. This method apparently worked, since it carried them through crusades, inquisitions and massacres during centuries of wandering. This period may be called national-religious existence. During those times they must have suffered intense insecurity with all its implications and consequences. Such experiences maintained through ages must have left in turn a considerable imprint on their psyche. This period would concern the further moulding of the personality until the end of the eighteenth century.

The French Revolution (1791) proclaimed the equality of the Jews with other peoples. They obtained the possibilities of receiving proper education and of participating in various trades and professions, as well as in other activities of life. This marked the liberal period which extends into our times and which has provided the final touches in the work of moulding the personality of the Jew to what it is at present.

Turning now to the physical and mental makeup of the Jew as he is known at present, the difficulties are enormous in view of the Jews' dispersion all over the world. We are not concerned here with the contributions of the Jews to science or culture; neither are we interested in their outstanding personalities. We are interested in the characteristics of the average Jew as he is known to his fellow—to his neighbor, the non-Jew. Even so, the Jew's description cannot be all-inclusive and applicable without exceptions or reservations. Morphologically, the proverbial Jew with his hooked nose, thick lips, curly hair, and small, stooped stature is disappearing. We see more and more of the fair-skinned, blond and round-faced type, with an increase in stature. This is no doubt due to mixture with non-Jewish groups, as well as to climatic and alimentary conditions. However, it must be said that in the Song of Songs, the beauty of a woman is described as blond; that of the man as white and ruddy with bushy locks, black as a raven.

Physiologically, the Jews do not show any specific traits. As to diseases, there are familial amaurotic idiocy and Buerger's disease which are found almost exclusively among Jews; however, their significance is unknown. Here, the question of blood grouping may be also touched upon. If the Jews were to present a distinct race

one might expect to find them having an exclusive blood group, either O, A, B, or A-B. The American Indian, for example, is practically uniformly of blood group O. What one finds is that the Jews' ratio of blood grouping runs approximately parallel with the ratio of the native population in the country of their residence. for example:¹

Percentage distribution of blood groups:	O	A	B	A-B
German	42.5	43.0	9.6	4.9
German Jews	42.1	41.1	11.9	4.9

In the matter of mental makeup, the observation of Troy McCormick² is of interest. This writer, after having visited the all-Jewish city of Tel Aviv in 1938, writes that the English climate has stiffened the features of the English Jew, has chilled his eye and restrained his gestures; that the Russian Jew is leisurely, sentimental and is made cheerful by Russian suicidal films; that the German Jew is extremely polite with his superiors and arrogant with subordinates; that the American Jew knows the latest slang; and that the Italian Jew speaks reverently of Mussolini. He concluded that in Tel Aviv a Jew is not a Jew, but is a Russian, a Pole, an Italian, a German, etc. This is, of course, an exaggeration. However, it is significant of the presence of diversity, and the absence of specific traits.

It may be said that the Jew is ambitious, aggressive, shrewd in business, keen in trade or profession, and likes to show off in a noisy way. He is zealous of learning and fond of money; both learning and money in his experience have proved to be excellent weapons of defense. Some of those who accumulated wealth have all the offensive traits of the *nouveau riche*. The eastern European Jew has certain mannerisms, and a peculiar intonation of voice, apparently rooted in the mode of restricted life he leads. The Jew is democratic but not very ambitious politically. He has his share in anti-social activities, but is not alcoholic. Other traits that may differentiate a Jew from the rest of the population are not always possible to describe, although they may be present. Outstanding features are: sympathy with those who suffer and a passionate will to live at all cost.

In the writer's work of examining mental cases over a period of many years, he has been unable to find any specific trend, idea or

conflict among the Jewish patients. This is particularly important, since the psychotic ventilates his mental content without reserve, as he is unable to control himself. An interesting feature among psychotics is, however, the fact that the Jew never hallucinates the image or voice of God. It would be the writer's interpretation that this is due to the strength of his originally conceived idea of the invisibility of God.

III

With the foregoing in mind, one may turn to certain aspects of anti-Semitism.

One finds the first evidence of anti-Semitism in the book of Esther: "and Haman said to King Ahasuerus. There is a certain people scattered abroad and dispersed among the people of all the provinces of thy kingdom; and their laws are diverse from the laws of other people; neither keep they the King's laws; therefore it is not for the King's profit to suffer them."

Judophobia probably began with the loss by the Jews of their homeland, and may be considered to have originated in Egypt, particularly in Alexandria, where a considerable Jewish colony established itself and became prosperous. The Romans treated the Jews tolerably well; they respected their fighting ability, since Rome had to keep a sixth of its army in Syria and Palestine. Otherwise, the Romans considered the Jews barbarians along with the rest of the non-Roman world. They taxed them heavily, but without molesting them. Yet, traces of Judophobia were shown by Tacitus, Horace and Juvenal.

During the centuries of dispersion and wandering the accusations against the Jews were provoked by the peculiarities of Jewish conduct, which was rooted in spiritual isolation, as a biological method of defense in the struggle to survive. The reaction to such conduct of the rest of the population bore the mark of each epoch, its expression in the past rooted largely in ignorance and superstition. During various ages of the past the accusations bore a religious and social character (murder of Christ, "chosen people," etc.); during our times the trend assumed a political aspect. Modern Judophobia originated in Germany and may be linked with the publication in 1793 by Wilhelm Marr of a pamphlet entitled: "Victory of Judaism over Germanism." Most political parties in Germany

picked Judophobia up as a useful weapon. It is worth notice that Marr's publication appeared after the French Revolution, the beginning of the liberal period.

Judophobia had its echo all over Europe. It was marked by excesses in Austria, Hungary, France, and, especially, Russia. It, however, reached its height of expression again in Germany under Hitler.

If the foregoing account is correct, the immediate cause for anti-Semitism was given by the Jews. After distinguishing themselves by the discovery of the invisible God, they naturally felt close to Him as the Father. They had an inner conviction of having discovered the truth. Such a conviction is accompanied by a sense of joy, and cannot be broken or cannot be given up. The Jews felt themselves to be a chosen people, different from others, and this resulted in isolation. Isolation bore resentment and suspicion. Subsequent events compounded the suspicion. To this end, one may mention the observation of Freud³ regarding the feelings of superiority of the Jews, namely that Jewish arrogance must have increased in the eyes of the Gentile after God had chosen a Redeemer from among Jews.

Again, picture the vigor with which the Jews attacked their new opportunities after the French Revolution. One can also imagine the reaction of the Gentile to such "aggressiveness" of people who must have appeared still foreign, due to such things as peculiar customs and manners. However, one must be aware of the fact that data on the conscious level alone cannot explain the situation. It is well known that a fact may give origin to a trend, because of unconscious elaboration. A person may not only project into his trend conflicts of his past life, but he may also borrow from racial memory. If this were not so, the superiority feelings of the Jew could not provoke such intense emotion as they do. A feeling of superiority is one of the mechanisms of defense of the personality, a useful method to overcome difficult experiences; and it is known to all. For instance, there is the attitude, already mentioned, of the Romans who considered all foreigners barbarians. The German slogan: *Deutschland über Alles* speaks loudly enough for itself. The English also look down on the foreigner, and so do others.

Even in this country one hears references to "100 per cent Americanism," as applicable only to a certain type.

As a striking example of the unconscious elaboration of a fact or idea, consider the crucifixion of Christ of which the Jews have been accused. Freud³ makes a rather interesting observation, namely that the Jews were accused of having killed God. It is his contention that there is some evidence that the Jews murdered Moses. The feelings of guilt regarding this murder must have been the basis for the idea of the Messiah. Thus, Paul could say of Christ that he is the Messiah who "truly came." The Jews stubbornly denied that they had killed God. However, the reproach is true if interpreted in the Freudian sense in the killing of the archetype of God, the primeval Father (Moses, in this instance) and his reincarnation.

IV

The examples show that one may have a logical explanation of the development of the Gentile-Jew relationship as far as anti-Semitism is concerned. The accusations bear the stamp of the epochs when they were put into circulation. Some of the accusations have been abandoned; others have been proved false; still others are exaggerated, and some are true. But those which are true are not specific. For instance, there is the accusation of aggressiveness. There is no doubt that other peoples than Jews may be aggressive.

However, even if one should establish the objectionable traits of the Jews, or should justify the reaction of the Gentiles to them, the intensity of the hatred, the phobia and the excesses cannot be accounted for by any such understanding. Above all the question arises as to why the Jews are treated *en masse*, that is why must they assume collective responsibility, instead of being treated individually?

Before the writer gives his own theory, he would like to mention certain psychological explanations. A general psychological interpretation of anti-Semitism—in addition to the references made in Part III—would be that the ambition of the Jew, his keen sense in business, trade and profession, makes him a highly qualified competitor difficult to beat. This may first result in resentment which later grows into hostility. The Jew's exaggeration of values and

his overactivity then may be annoying to the more restrained neighbor, with the result that the hostility is compounded. This compounded hostility may swell further by absorbing other complaints against the Jew, ultimately progressing to a trend against him. In psychological terms, this is a projection mechanism. It is a mechanism of defense that allows a person the comfort of feeling better by blaming the next fellow for the wrong he himself did or thought. In this connection, the Jew might feel proud of being the cause of somebody's happiness. And if this interpretation were true, one could not refrain from the suggestion that the Jew continues in this world the work of Christ, even if he is unaware of it. If the interpretation is not true, the Jew should consider himself the "rejected darling of God," rather than a member of a "chosen people."

Another theory was advanced by Dr. Leon Pinsker,⁴ a fervent Zionist. He asserted that since the Jew is in exile, he can be compared to a ghost, a wandering spirit without a body—that is, without a homeland. People are terrorized by ghosts; and terror spreads hatred. This hatred is a "psychic disease" which Dr. Pinsker calls "demonopathy." This disease, having been inherited through the ages, cannot be cured. If it were not for the hopeless note of the theory, it would be fascinating. Of course, one can interpret it as a wish on the part of an ardent Zionist to regain his homeland and a longing for it. It appeals to the present writer for its poetic value.

Freud³ offers the following hypothesis. According to him, anti-Semitism is rooted in the long past. He believes that the jealousy that the Jews evoke is akin to the jealousy felt for the first-born, in this case the favorite child of God, the Father. Another idea is that all the people who excel in the practice of anti-Semitism have been Christians only a relatively short time. Under the thin veneer of Christianity, they remain polytheistic. The hatred of Judaism is also the hatred of Christianity. The shortcoming of this theory lies in its inapplicability to the times before Christianity.

In addition to the foregoing, the present writer would like to offer his own theory. Following in the footsteps of Freud, who has shown the value and significance of the past for the understanding of the operation of the mind, the writer would call attention to the following phases of evolution of the social structure of the hu-

man family, as may be judged from anthropological, mythological and historical evidence. One may distinguish: the phase of chaotic relationship; the phase of marriage under the supremacy of the woman, or the epoch of the *matriarchate*; and the phase of the supremacy of the male, or the epoch of the *patriarchate* which extends into the present. It seems to the writer that each epoch has left a deep imprint upon the human psyche and that the transition from one epoch to another has caused considerable conflict. On mythological evidence, the patriarchate was achieved after a great struggle, the painful memory of which is deeply repressed in the unconscious. The writer believes that the breaking through of this repressed material is responsible to a considerable degree for tension between individuals—such as tension between the sexes, as seen in certain maladjustments in social and marital life—and tension between other persons and groups, as demonstrated in certain antisocial acts which are rooted in rivalry and aimed at supremacy as a surrogate of happiness.

As an example, one may recall the myth regarding the Amazons. They were women warriors who camped on the hill of Ares, near the gates of Athens. Many attempts to conquer them failed until Theseus emerged victor. Following their defeat, the Amazons entered into happy marriage under the supremacy of the male.

The conflict is brought out powerfully by Aeschylus. According to him, Orestes murdered his mother to avenge his father. A trial was ordered by Zeus and held on the hill of Ares, the site of the camp of the Amazons. The Erinyes, the avenging deities, daughters of the Earth, symbolizing matriarchy were prosecuting. They were upholding the "old" law of blood relationship. From the standpoint of matriarchy, only mother and child are related by blood. Therefore, Orestes was guilty of blood-murder and ought to be punished accordingly. Child and father and husband and wife are not related by blood; therefore Orestes' mother is not guilty of her crime against his father.

Apollo was appointed by Zeus to be defender. He was to uphold the "new order," the patriarchy. According to the patriarchal code, the mother is a passive instrument. It is the father who is the creator. Proof—the daughter of Zeus who had no mother. Orestes was freed by the jury, showing the triumph of patriarchy.

It is the writer's belief that the matriarchy-patriarchy conflict is in operation behind Judophobia. As we know from clinical experience, the mechanism of a certain process may be easier to establish by means of following up the process to its height of expression. This is so because at the latter stage there is no interference of intervening forces, or compensation. With regard to Judophobia, the latter has reached its maximum height of expression in the person of Hitler, who is completely outspoken. There is no restraint, compensation or covering up. The writer reasons, therefore, as follows:

To begin with, German mythology has its own Amazon in Brunhilde, the heroine of the *Nibelungen* whose name means "the warrior woman in armor." She can be won only by the man who is able to conquer her by trial of strength. Siegfried, who attempts it, is tied hand and foot to his bed by Brunhilde. It is of significance that Hitler is reported to have a peculiar interest in the *Nibelungen*. Considering his actions, one may judge that he is avenging Siegfried. This is demonstrated by the fact that he is reducing women not only to a submissive rôle of childbearing, but is reducing them further to the more primitive phase of chaotic relationship. One may recall here that during the recent epoch of "Kaiser-Germany," the German man thought that the woman's rôle was essentially in the kitchen, nursery and church. This belief may be considered a forerunner of the ideas of Hitler on the subject.

The writer believes that the height of expression of victory over the matriarchate in thought is the idea of the "brain-born child" of man, the Homunculus, as portrayed by Goethe in *Faust*. Hitler again steps higher. He apparently believes himself to be the "brain-born child" of God. He is the "law." Only such secret conviction of one's destiny can explain his ruthlessness and wanton destruction of everything that may stand in his way.

To make his "new order" work, he must get rid of the "old law." Here is where the Jews come in. They are the "old law," and they remind him continuously of his matriarchal dependence. Consequently, he projects upon them his own cravings for world domination. Now, they are doubly his rivals. He must destroy them, and he picks up the blood-theory as his weapon. He establishes the theory of the purity of the Germanic "race" in blood.

German people wherever they may have been born, or wherever they have lived remain German. Other "races," especially the Jews, are of impure blood. Considering his actions, it is evident that he thinks that it is not a crime to kill someone to whom one is not related by blood. But this is a principle of matriarchy. His unconsciousness has played a trick on him. And this is not all. To be thorough, he must also destroy Christianity. The drive increases his conflict to limitless proportions. Since he cannot possibly succeed in such an undertaking, his anxiety is boundless, continuously seeking new and greater outlets. The acute exacerbations of his anxiety take place whenever he fails in an adventure, because failure reminds him unconsciously of his inability to free himself of the bonds of the mother of morality and ethics of our civilization.

A parallel historical example of the fight of man to emancipate himself of the painful memory of the matriarchate is the ferocity with which the Romans fought the Etruscans. The Romans would not rest until they wiped out everything which could remind them of the Etruscan, in order to remove anything which could make them recall their matriarchal dependence.

V

One may conclude that Judophobia is a psychopathological phenomenon rooted in the matriarchy-patriarchy conflict. Its manifestations signify unsuccessful attempts at repression of the painful memory. The acuteness of an exacerbation of the phobia depends on many factors—on many activities of life. Due to the persistence of the matriarchy-patriarchy conflict through the ages, it became interwoven with the system of defense of the personality. This system maintains among other defense mechanisms, so to speak, a "lightning rod" for our difficulties. In view of the benefit the "rod" gives to its many users, it is difficult to influence them to give it up. Because of the universality of the conflict, diversion of tension by the "lightning rod" proceeds through the Jew in a collective manner.

This discussion would lead one to think that the prognosis is not so good. In fact, attempted treatment has failed. So far, neither religion, nor political measures have helped. Still, the good doctor

should not give up his case. The failure of the remedies applied appears to lie in their emotional aspects. It may be hoped, therefore, that science, which is not emotional but exact, precise and objective, may find a cure. While it is true that science cannot master our past, it could remedy the present by preventing us from recalling a painful past. It would seem reasonable to expect, if social conditions should improve, social security be established and other remedies to allow man to maintain peace and happiness be found, that the conflict under discussion will have much less opportunity to break through. In the meantime, both parties would do well by acting toward the problem with some self-restraint, in the manner we act to subdue other antisocial tendencies.

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SCHIZOPHRENIA IN CRYPTOGENIC NARCOLEPSY

Report of a Case

BY SAMUEL R. LEHRMAN, M. D., AND EDWARD J. WEISS, M. D.*

In recent years, there has occurred a remarkable upsurge of interest in the narcoleptic-cataplectic syndrome. This syndrome, which Wilson¹ considered rare as late as 1926, today comes to the attention of neurologists and psychiatrists with increasing frequency. It has even found a place in popular fiction.² Cave³ collected 481 reported cases by 1931, and Murphy⁴ has stated that "well over 200 more have been added, the majority in the German literature" (1941). Although Gelineau⁵ is credited with the first published report in 1880, reporting a case presented by Caffé in that year, several other references to this condition appeared earlier. Lennox,⁶ in a paper attempting to claim priority for Thomas Willis (1677), states that Westphal is commonly believed to have first described the syndrome in 1877. He also says that "a careful search of ancient writings would probably bring other descriptions of narcolepsy to light."

In the German literature, many authors refer to "Friedmann's disease," but there can be no argument over the superiority of Gelineau's name: narcolepsy. Gelineau considered narcolepsy a "*morbus sui generis*," and his original description has been little improved upon: "An imperious desire to sleep, sudden, and of short duration, reproducing itself at intervals more or less closely related." Redlich⁷ and Adie⁸ also consider narcolepsy a disease *per se*. Others, however, particularly Notkin and Jelliffe,⁹ feel that narcolepsy is a syndrome which may accompany or be a sequel to a variety of pathological conditions. Reviewing the literature in 1934, they found that all reported cases could be classified into five groups: 1. Those with definite psychopathologic background (64 cases). 2. Those with definite evidence of cerebral involvement. 3. Those with chronic encephalitis. 4. Cases with combined narcoleptic and epileptic attacks. 5. Cases of the cryptogenic type. Al-

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though this classification leaves much to be desired, it strongly supports the belief that narcolepsy and cataplexy represent a syndrome rather than a disease. The majority of workers in this country so consider it.

Since Gelineau, a number of excellent clinical descriptions of the syndrome have appeared in the literature. Bing and Haymaker,¹⁰ relying largely on the material published by Cave, and Notkin and Jelliffe, give the following concise picture:

"The narcoleptic-cataplectic syndrome manifests itself by 1. sudden attacks of sleep, and 2. by sudden attacks of loss of muscle tonus. In the idiopathic or cryptogenic form of narcolepsy, the patient suffers both types of attack. It is rare for attacks of sleep to occur in the absence of cataplexy and vice versa. This is in contrast to the narcolepsy occasioned by an organic lesion in which one or the other occurs but not both.

"In narcolepsy the patient drops off to sleep on almost any occasion and he may do so four or five times a year or as often as 20 or 30 times during the day. He may be able to recognize the approach of an attack by the feeling of irrepressible fatigue. The attacks may occur while the person is eating or speaking or mounting a street car, etc. Sometimes strong emotion precipitates an attack. As a rule the patient can be easily aroused and he usually wakes up suddenly with a clear mind. Sometimes he knows what is going on about him but is unable to talk. In the brief interim of sleep he may dream and be able later to relate the dream. There are conflicting reports as to the state of the pupils during attacks, some stating that the pupils are constricted and others that they are dilated. A pupillary response to light can usually be obtained.

"Cataplectic attacks which usually last only a minute or so are characterized by an affective loss of muscle tone. When laughing or weeping, when upset by anger, annoyance or fear, the patient may suddenly go down on his knees or fall prone on the floor. He always retains full consciousness. Sometimes only the head sinks to the chest, the lifted hand drops limp, or it releases whatever it is holding, or the patient suddenly ceases speaking for a few moments. During an attack the patient is unable to speak or move. Corneal and patellar reflexes are both lost. The pupillary response to light is usually retained."

Despite the fact that this syndrome can no longer be considered rare, comparatively few cases with definite psychopathological background have been reported (64 cases up to 1934).⁹ Even fewer have been the cases reported of narcolepsy associated with schizophrenia. Brock and Wiesel¹¹ recently published a paper in which they cited two cases of so-called "sleep hallucinosis," one of which eventuated into schizophrenia, paranoid type. In this case, the dreams which often occur in narcolepsy were so vivid as to be indistinguishable from reality. The patient developed an acute hallucinatory paranoid state, after suffering from such terrifying dreams for eight years. The development of paranoid psychotic states was also noted by Fröderberg,¹² Brown,¹³ Daniels¹⁴ and Locke and Bailey.¹⁵

The following case report adds another to the still small number of cases of narcolepsy in schizophrenia. This case approaches the unique in that the paranoid projections seemed to originate in the patient's self-consciousness over her attacks. Another interesting feature is that both narcolepsy and cataplexy occurred in this case with the psychopathologic picture of schizophrenia. Unlike the case of Locke and Bailey,¹⁵ insight was markedly impaired.

CASE REPORT

A. B., a single, white, female, aged 29 years, was admitted to the Creedmoor State Hospital May 13, 1942, on a regular form of commitment from the Bellevue Hospital observation ward. The family history, as given by a married sister at whose home the patient usually lived, was said to be negative for nervous and mental diseases. Her mother died in 1931 of "a ruptured appendix." Her father and siblings are living and well.

The patient was born in Queens Borough, New York City, on May 8, 1913. She was the youngest of eight children. Her birth and early development were said to have proceeded without mishap. She had the usual childhood diseases without complications. There was no history of encephalitis, epilepsy or trauma of the head. She was graduated from grammar school at the age of 14 and was considered an average student. She attended high school for one year and left at the age of 15. She then completed a one-year business course, and was subsequently employed as a stenographer.

During the depression years, she found it difficult to obtain stenographic employment and drifted into factory work. She was employed for the two years previous to admission in a paper cup factory. This occupation had been interrupted only by her present illness.

Since the age of 15, the patient has had "sleeping spells." These consist of sudden attacks during which she appears to be in a deep sleep. They come at any time, during work, or while reading. They last for five minutes or so, and the patient awakens refreshed. She has also had attacks of becoming "paralyzed" under emotional stress. For example, if she heard a good joke she would laugh so hard that her whole body would go limp. This state would last a few minutes, and during this time she would be unable to use her body musculature. She would slump to the floor or, if she was sitting, her head would fall to her chest. Consciousness was always retained. On recovery she would beg: "Please don't tell me any more jokes."

The patient's personality can be described as schizoid. She was quiet, seclusive and had few friends. She has always been sensitive about her "spells." Her psychosis appears to have begun about six months prior to admission at the age of 28. At this time, she appeared to become hypersensitive. She felt that fellow-workers were talking about her because of her attacks, which occurred in the factory in full view of the other employees. She felt that they were discussing her "spells" and making derogatory comments with reference to them. On one occasion, she had a narcoleptic attack while eating in a restaurant; and, thereafter, she refused to go to any restaurant because she said "people there laughed at her and talked about her." Gradually, she also developed ideas not directly connected with her narcoleptic attacks. About two weeks prior to admission, she came home from work and complained that the matron told her she had "B. O." Since then, she has been hearing voices expressing derogatory ideas about her. She also felt that she was "hypnotized and could be controlled by others." She stated that people could "read her mind."

Although she never actually mentioned suicide, she complained that she "could not stand it much longer" and was then taken to

her family physician who suspected a mental disorder and advised immediate hospitalization.

At Bellevue Hospital, where she was admitted on May 5, 1942, she was described as having auditory and visual hallucinations, ideas of persecution and preoccupation with sexual ideas.

Eight days later, when admitted to Creedmoor State Hospital, her mental status had not shown any essential change. She was up and about, neat, clean, quiet, agreeable and cooperative. There was some tendency to seclusiveness. Nocturnal sleep was fitful, but she showed normal psychomotor activity at the time of the interview. Her stream of thought was disconnected, and at times there were incoherence, irrelevance and definite blocking. Her emotional reactions seemed superficial, inadequate and inappropriate. Her mental trend was concerned with ideas of influence, ideas of reference and more specific paranoid ideas. Auditory and visual hallucinations were admitted. "I really went to Bellevue as an emergency case. I went there myself. Other people put ideas in my head." (What sort of ideas?) She blocked. "I thought I was mesmerized. I don't understand it. Lately I am so confused. I thought people were reading my thoughts and I theirs. It has made me a nervous wreck. A doctor told me I had a brain clot." (Do you hear voices?) "Yes. I think I am a medium. I get messages. I hear voices of different people. They call me bad names." (Have you thought of suicide?) "Yes, I thought of it." (Laughs.) "I'm afraid I couldn't do it because I want to get healed." Throughout the interview, she showed no reluctance to discuss her gross psychotic symptoms, although she blocked or voluntarily avoided any discussion of their content. Her sensorium was intact and her intelligence was rated as average. She did not appreciate that she was mentally ill and felt that she did not belong in the hospital.

The general physical, neurological and gynecologic examinations were essentially negative. The laboratory examinations including a blood Wassermann test were also negative.

During her subsequent stay in the hospital, A. B. was subject to several attacks of narcolepsy daily. While sitting on the ward she would suddenly fall into a deep sleep. Her tongue would protrude, and she would snore noticeably. Her entire musculature appeared markedly hypotonic. The head rested on the chest. A magazine

which she had been reading would fall to the floor. On several occasions she fell asleep while being interviewed by one of the writers (E. J. W.). He asked, on her awakening, "What happened?" She became annoyed and said "I don't understand it. Something fishy is going on. Somebody is making me fall asleep. I'm getting sick and tired of it."

The patient admitted cataplectic attacks from laughing or crying and was observed in a typical cataplectic attack on two occasions when she became angry over being transferred from one ward to another.

Her mental condition has not shown any essential improvement. She now states that she can "stop the visions," but she continues to hear the voices. The voices say derogatory things about the persons with whom she converses, and this is very embarrassing. At present she would like to remain in the hospital because she is "understood here."

Treatment was aimed primarily at controlling the narcoleptic-cataplectic syndrome. Excellent results were obtained with benzedrine sulfate, 10 mg., b. i. d. The narcoleptic attacks practically disappeared, and the patient appeared bright and alert. Interestingly enough, the paranoid projections remained. But now they no longer involved her attacks. The official diagnosis made in this case was dementia praecox, paranoid type.

COMMENT

A study of this case and of the available pertinent literature brings up for discussion a number of questions. Inevitably, the question of etiology is raised. Where the narcolepsy is associated with specific or vague neurologic or physiologic disorders, the fact of association has been considered of causal significance. Thus, chronic encephalitis, epilepsy, brain injury and endocrine dysfunction have been variously implicated as etiological agents. A "psychopathologic background" has also been considered significant enough for Notkin and Jelliffe,⁹ and Murphy⁴ to consider as a separate nosological entity. In the cryptogenic cases, where "a most careful examination fails to reveal any definite evidence of involvement of the central nervous system or of any other system of the organism," Notkin and Jelliffe incline to assign a psychogenic ori-

gin. They feel that the narcoleptic attack is "an expression of psychologic regression." Jelliffe and White¹⁶ similarly state that "sudden attacks of sleepiness are usually psychogenic in origin and will often be found to disguise auto-erotic phantasying and to be compulsive in character." While the present writers tend to be in agreement with the psychodynamic interpretations expressed, they strongly object to the confusion of "cryptogenic" and "psychogenic."¹⁷

Karpman has recently translated and epitomized a psychoanalytic study of a case of narcolepsy published by Missriegler a number of years ago. Although the narcoleptic attacks seemed to be genuine, cataplexy was not present. There was also a history of questionable "infection of the brain" which Missriegler believes to have been a misdiagnosed neurotic symptom. Inasmuch as the patient was cured, or at least greatly benefited, by psychoanalysis, this belief is probably justified; and despite the familial and individual psychopathologic tainting one feels that psychogenesis played an important rôle in the etiology of this case of narcolepsy. The absence of cataplexy is significant. A similar patient observed by one of the writers (S. R. L.) had attacks of narcolepsy without cataplexy when his occupation was felt by him to be unpleasant. The "gain of illness" is obvious (and was most successful). Without risking unwarranted conclusions one has the impression that the psychogenic variety of narcolepsy is not accompanied by cataplexy.

Notkin and Jelliffe⁹ also imply (as do Bing and Haymaker, v. s.) that where narcolepsy and cataplexy occur in the same patient, the syndrome is of the cryptogenic type. They also separate the cryptogenic group from the group with "psychopathologic background." The case here reported militates against the rationale for such a division, since here is a case of cryptogenic narcolepsy and cataplexy which is associated with schizophrenia. One is at a loss to determine which came first, the narcoleptic-cataplectic syn-

*"Cryptogenic" means that the cause is hidden or unknown; while "psychogenic" implies that the etiology resides in the psychic rather than the material sphere but is none the less real and definite. The writers believe that, psychologically, a psychodynamic interpretation is possible even when the organic pathology is known. This has been demonstrated by Hollos and Ferenczi (17) for general paresis and has been restated by Schilder (18). Compare also Freud's "A General Etiological Formula." (19)

drome or the abnormal mental state (considering the latter in a psychosomatic light). In the case reported by Brock and Wiesel (q. v. s.) there is a strong possibility that the onset of the terrifying dreams was already an expression of a psychotic state. The fact that vivid dreams occur in narcolepsy is not questioned, but one must not overlook the content of such dreams.

Of the few reported cases of narcolepsy in schizophrenia, all were diagnosed as paranoid. One wonders if this is more than a coincidence. Is there an association between a predisposition to a projection psychosis and narcolepsy? In the writers' case, the narcolepsy itself served as a starting point or focus for the projection mechanism. With the alleviation of the narcolepsy, the paranoid ideas no longer centered about that syndrome but were more diffuse. It should be repeated however, that the diffuse paranoid ideas began before the alleviation of the narcolepsy and cataplexy. Furthermore, this patient was described as having had a schizoid personality long before the onset of the narcolepsy. Conversely, the syndrome was in evidence for 13 years before the first sign of a psychosis.

In the present state of our knowledge, the questions raised defy definite replies. Clarification of the problems of etiology, mechanisms and pathology of the narcoleptic-cataplectic syndrome must await further investigation. In the light of the present paper as well as of others, the writers feel that "cryptogenic" is the most honest if not the most enlightening adjective to apply to this syndrome.

SUMMARY

1. A review of the literature reveals a relative paucity of case reports on narcolepsy in schizophrenia despite the fact that the uncomplicated narcoleptic-cataplectic syndrome is being more widely recognized.

2. A case report of narcolepsy and cataplexy in a paranoid schizophrenia is presented.

3. A number of questions pertaining to the nosology and etiology of this syndrome are discussed.

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RESULTS WITH ELECTRIC CONVULSIVE THERAPY IN 200 CASES OF SCHIZOPHRENIA

BY LOTHAR B. KALINOWSKY, M. D., AND HARRY J. WORTHING, M. D.

A number of reports on small series of schizophrenics treated with electric convulsive treatment give widely varying impressions.¹⁻⁹ This might be explained partly by differences of material, partly by an often insufficient number of treatments. It, therefore, seemed appropriate to attempt a systematic evaluation of an unselected group of institutional cases of dementia præcox treated in a shock therapy unit where approximately equal numbers of patients were subjected to insulin and to electric convulsive treatment, and where, therefore, no preference was given to electric shock therapy. The writers are now able to report on 200 schizophrenics who had full courses of electric convulsive treatment at Pilgrim State Hospital.

Three types of results are differentiated: unimproved, improved, and remission. The subdivision of remissions into two groups of "recovered" and "much improved" patients is arbitrary. Bleuler denies that one can speak of a full recovery in schizophrenia. Various clinicians differ considerably in their definition of "recovered" and "much improved." Therefore, the common term "remission" has been used here for those patients who no longer show any active psychotic symptoms and are able to take up their former professional and personal lives in the community. All patients classified under the heading "remission" were able to leave the hospital. Patients classified as "improved" became stabilized on a regressed level but made fairly good adjustment, either in the hospital or at home. The improved group includes a number of patients on parole; here no differentiation between those in the hospital or at home was made, because the question of parole in some instances depends more on social factors than on mental conditions. The word "unimproved" does not imply that these patients were totally uninfluenced by the therapy. Most of them showed temporary improvement after four or five treatments. There are many patients among these failures who were improved in behavior, who no longer required tube-feeding or who showed other symptomatic improvement. The administrative importance of such results should be

stressed. As far as the psychotic process is concerned, however, these cases must be classified as unimproved. It may be mentioned that the evaluation of results was not made by the physician who gave the treatments.

It is acknowledged that figures in a mixed material have little meaning, and that reports giving a percentage of remissions without specifying at least the ratio between cases of short and long duration should not be given. The writers' entire group had a remission rate of 40 per cent, which is low because it contains a large number of long-standing cases. Only breaking down the material according to the duration of illness, as the most important prognostic factor, gives information as to the real results. The cases were subdivided into groups with duration of less than six months, between six months and two years, and over two years. A fourth group is represented by older cases with previous attacks, but which had had full remissions from these. It is misleading to group chronic cases which have been constantly ill, with those which have had previous remissions.

The difficulty in obtaining reliable information regarding the onset of psychosis is well known, but careful checking of anamneses yields adequate data in most cases. Abnormalities which existed in the prepsychotic personality without actual psychotic symptoms, even for years prior to the acute outbreak, were not considered as bespeaking an insidious onset. The time of occurrence of the acute symptoms was taken as the onset. On the other hand, in cases where the relatives had noticed more or less rapid personality changes followed by an acute eruption, the beginning of the character change was taken as the date of insidious onset. It may be emphasized that errors never falsify results favorably. Relatives tend to report too short durations, a trend which only increases the number of failures in the group of recent onset.

The results grouped according to these criteria are shown in Table 1.

Reviewing the results, the most striking feature is seen to be the constant decrease of remissions with increased duration of illness. The high remission rate of 67.4 per cent in schizophrenics of short duration is all the more important as these cases represent a substantial part of the new admissions to all institutions. One

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TABLE 1. RESULTS IN 200 CASES OF SCHIZOPHRENIA TREATED WITH ELECTRIC CONVULSIVE TREATMENT

Duration	Total	Remissions	Improved	Unimproved
		(Recovered and much improved)		
Less than 6 months.....	46	31 (67.4%)	10 (21.7%)	5 (10.9%)
6 months to 2 years	58	25 (43.1%)	14 (24.1%)	19 (32.8%)
More than 2 years	65	6 (9.2%)	26 (40%)	33 (50.8%)
Older cases with previous remissions	31	18 (58%)	6 (19.4%)	7 (22.6%)
Total	200	80	56	64

may add that most of the acute cases of this group had illnesses of more than three months when treatment was started. These patients remained at an observation hospital for some time before they were transferred to Pilgrim State Hospital where an additional few weeks passed before they received shock therapy. This excludes patients with brief psychotic episodes, and makes the figures even more significant. Cases between six months and two years duration still have a fair chance as shown by the remission rate of 43.1 per cent. The results become increasingly poor after illness of more than two years (only 9.2 per cent remissions). Favorably reacting chronic cases described in some other statistics might be misleading because they may represent cases such as are placed in the writers' fourth group. It is striking that these patients with previous attacks have nearly the same prognosis for remission as the acute cases without previous attacks, although they may have reached somewhat lower levels after each new attack.

It must be pointed out that there are individuals who get worse under treatment. Deeply regressed but quiet patients may become chronically disturbed. In quiet, deteriorated schizophrenics where no chance of satisfactory final results can be expected, the treatment is contraindicated and should be discouraged.

A followup study was made of 38 patients classified as remissions, who finished treatment between one and two years ago. Of these, all but two have maintained their improvements. Relapses occur frequently within one or two weeks after the treatment is terminated, while the patient is still in the hospital. However, those patients rarely relapse who, after a period of observation of

a few weeks, keep their full improvement. Once a full remission is obtained, relapses in schizophrenics after electric convulsive treatment do not seem to be more frequent than after insulin treatment. A survey of the literature on pharmacological convulsive therapy shows that this observation is in full accord with the experience of those workers with metrazol who gave adequate treatment.^{10, 11} The cases classified as only improved are those which show a higher rate of relapse and represent most of the returns to the hospital. The necessary number of treatments is one of the most important questions; and it is felt that much of the discordance of different results is explained by this factor. Practically all the patients had 20 generalized seizures. Subconvulsive responses, considered ineffective by most authors, were not counted.¹² While in manic-depressive and involutional patients, 10 or less treatments proved sufficient, 20 seizures must be used in schizophrenia. The writers' present tendency is to increase the number of treatments to 25 or 30. Some patients who did not maintain improvement after 20 convulsions recently received 10 more treatments, and several of these obtained lasting remissions.

Treatment of 12 schizophrenics with fair prognosis, who had full remissions after three, four or five treatments, was discontinued after 10 convulsions. Most of these patients relapsed shortly thereafter, one of them after parole. By continuing their treatments to totals of 20 or more convulsions, remissions were obtained in most of these. Reports on the use of metrazol show that almost all of the workers who have had good results describe similar experiences and insist upon a minimum of 20 to 30 treatments to achieve results. Reports of results with electric convulsive treatment as well as with insulin treatment should specify the number of applications for each individual case. Frequently, only the average number given to the group is reported. This is misleading because the greatest numbers are usually given to chronic cases without responses; and treatment of the favorable cases with good initial responses is discontinued when they are symptom-free, and they consequently relapse. The writers realize that it is often difficult to complete 20 convulsions in voluntary patients who are improved after four or five treatments. This calls for persistence on the part of both patient and physician.

Treatments in this group were given three times a week. Daily application had been tried in a group of 18 patients, but most of them showed a confusional state with complete disorientation after six or seven of these daily treatments. Several of them did not recognize their nearest relatives. This organic picture cleared with surprising rapidity in all patients after a week or 10 days. However, since results in this group were no more favorable than in the group treated three times a week, it was felt unnecessary to produce this deep confusional state.

Concerning the various prognostic criteria, the writers' experience confirmed the conclusions reached with regard to other forms of shock therapy. Next to the duration of illness, the most important prognostic factor is the type of onset. Insidious onset is of ominous significance. Of 74 cases with remission on whom reliable anamnestic data were available, the onset was described as acute in 58, insidious in 16. The converse was found in 57 unimproved patients, of whom only 19 had apparently acute onsets, and 38 had insidious ones. Even assuming many errors in the anamneses, the difference is too striking to be considered casual. Nevertheless, it is certainly not justifiable to refuse treatment because of an insidious onset.

The type of onset of psychosis is seen to be one of the most important reasons why the results of shock treatment in different hospitals cannot be easily compared. This was observed by one of the writers (Kalinowsky) who had the opportunity to treat a series of patients in the New York State Psychiatric Institute and Hospital simultaneously with the cases reported here. This group, consisting exclusively of voluntary patients, gave poor results compared to the institutional group which is the subject of this study.† These contradictory results obtained by the same worker using identical techniques offer the possibility of an explanation of the diverse impressions of different workers. In a group of voluntary patients, those with insidious onset and course are more frequent. They not only offer a poorer prognosis, as has just been shown, but they also are hospitalized and treated later than those with acute symptoms.

†This is in full accordance with a study by W. A. Horwitz and C. Kleiman (*PSYCHIAT. QUART.*, 10:72, 1936) who found the unusually low figure of 4.09 per cent for spontaneous recoveries in the material of the Psychiatric Institute.

The latter obviously conflict with society and are committed to institutions at much earlier stages of their illnesses. Therefore, they represent a more favorable group. Such analysis of different material leads to the conclusion that apparent differences in results may be really explainable by differences in material.

An attempt to consider the treatment response of the various subtypes of schizophrenia indicated that it is impossible to formulate any rigid classification of the schizophrenic group in subtypes, as complete changes of symptomatology are frequent during treatment. The value of classifying results according to subtypes is also limited, since differentiation among various workers is not standardized. Some general impressions, however, may be given. The results in patients with catatonic stupor were not so satisfactory as is generally believed. Convulsive treatment is successful in breaking up the motor symptoms of all cases of catatonic stupor; however, their schizophrenic residue offers a poor outlook. More favorable results are obtained in patients with catatonic excitements or in those patients whose symptomatology shifts between stupor and excitement. Paranoid schizophrenics with delusions and hallucinations have the best outcome. This similarity to results following insulin treatment has likewise been reported by workers in metrazol convulsive therapy who did not discontinue treatment after the first disappearance of delusions and hallucinations. The least favorable cases are young hebephrenics. Patients with the basic symptoms of schizophrenia, but without delusions or hallucinations, classified by some authors as "schizophrenia simplex," by others grouped with the hebephrenics, still show a fair rate of remissions.

To facilitate comparison with other statistics, two additional evaluations have been made. The outcome in those patients having up to one year of illness was calculated. They still showed 56.8 per cent remissions, 22.9 per cent improved, and 20.3 per cent unimproved. These figures again are in accord with many statistics on insulin and metrazol. Another proposal made by Zeifert¹² was to report in parole rates rather than in clinical terms. He was able to report 84.3 per cent in a series of metrazol cases of less than six months duration. The writers' own figures are nearly the same,

80.4 per cent in cases of less than six months, 48.3 per cent in those between six months and two years duration and 18.55 per cent in older cases.

In discussing shock treatments, a statistical approach is necessary. Likewise important, however, is the clinical impression. Whoever works with convulsive therapy is impressed by the frequency with which one can predict the breaking up of severe psychotic pictures after four or five treatments. As to the much-discussed ratio between the final results and spontaneous remissions, it should be said for electric, as well as for the other shock treatments, that the fear of treating unnecessarily a certain number of patients who would have recovered spontaneously is no excuse to wait with all patients until it is too late to treat successfully at all.

Complications remain few in number. No fatalities occurred in this group or in the writers' other material. Two complications with good outcome were observed in this group; one patient, reported in detail elsewhere,¹³ had respiratory difficulty and required artificial respiration for 15 minutes; another patient developed a lung abscess which was treated successfully with sulfanilamide. Both recovered from their psychoses and have been at home for more than one year. Such occurrences, however, serve to remind that a method is being used which has dangers and which should not be applied indiscriminately. Significant memory impairment is transitory and is not complained of by successfully-treated schizophrenics as often as it is in other conditions. There remains, frequently, a striking amnesia for the psychotic experience. This should not be considered lack of insight.

The attitude regarding contraindications has to take into consideration the severity of the disease, dementia præcox, which is dealt with. Myocardial damage might not be a contraindication when the patient's heart is already endangered by psychotic exhaustion. Also, tuberculosis should not be an absolute contraindication for electric shock therapy. Inanition alone, as produced by feeding difficulties in stuporous patients, is no contraindication but rather a definite reason for treatment. Breaking up of the stupor and gain of weight can be safely predicted, as was seen in a patient who was reduced in weight to 65 pounds. She gained 35 pounds during, and another 27 pounds, after, the treatment.

The writers will not comment here on technical problems. It may be mentioned, however, that it is preferable to obtain a convulsion with each single application. This is best achieved by increasing the current sufficiently.

It can be said in conclusion that results in this group of 200 schizophrenics were satisfactory. In the acute cases of schizophrenia, which are numerous among the admissions to all mental institutions, electric shock therapy is of definite value. The question as to how electric shock therapy compares with insulin therapy has still to be settled. Large series of both types of therapy are given simultaneously in the shock treatment unit of Pilgrim State Hospital under comparable conditions. The goal in the parallel series of the various shock methods is to determine accurate indications for each type and to find new ways of combination. If satisfactory results with electric shock in schizophrenia are confirmed, one might initiate treatment in an individual case with the simpler electric shock therapy and reserve insulin for those who do not show lasting benefit therefrom.

In the present emergency it can be expected that electric shock therapy will have an important rôle because little assistance is required. Twenty to 25 patients can be treated in an hour. This simplicity of technique should make it possible, even with increasing shortage of personnel, to give the benefit of treatment to all those schizophrenics who, according to the writers' results, have fair chances of remission.

SUMMARY

1. Results in 200 schizophrenics treated with a full course of electric convulsive treatment are reported.
2. Figures on a mixed material being without meaning, the material was broken down according to duration of illness. The rate of remissions (recovered and much improved) is 67.4 per cent for cases of less than six months duration, 43.1 per cent between six months and two years duration, and 9.2 per cent in those of more than two years duration. Older cases with previous remissions have a fair prognosis for the new attack.

3. To facilitate comparison with other statistics, the remission rate in cases up to one year in duration (56.8 per cent) and figures for the parole rates of the various groups are also given.

4. The rapid decline of favorable results in cases with longer duration of illness makes early treatment in schizophrenia imperative.

5. Twenty convulsions are the minimum number required in schizophrenia. Discontinuation after 10 treatments in patients who are symptom-free at this time leads to relapse in most cases. An insufficient number of treatments is one of the explanations for failures in convulsive therapy.

6. Another factor responsible for apparent differences in results is seen in differences of material. One of the authors (Kalinowsky) obtained poor results in a group of voluntary patients with less acute symptoms in one hospital, and very satisfactory results in institutional material, the subject of this study.

7. A followup after one year or more shows a low rate of relapses if full remissions had been obtained.

8. The similarity of results in schizophrenia when using the various shock methods adequately is stressed and will be more closely examined in comparative studies which are under way.

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THE OUTCOME OF ELECTRIC SHOCK THERAPY IN THE NEW YORK CIVIL STATE HOSPITALS

BY BENJAMIN MALZBERG, Ph.D.

Since December, 1936, several types of shock therapy in mental disease have been introduced into the New York civil State hospitals. Insulin shock treatment of patients with dementia præcox was the first to be experimented with, and the results have been described on several occasions.¹ The results of the second major form of shock treatment, metrazol, have also been described at length.² A third form of shock therapy is now in use, differing from the preceding in being effected by an instrument in the field of physics rather than by a pharmacological agent. This is treatment with electric shock, which has gradually been adopted by all but three of the civil State hospitals. In accordance with customary procedure, the hospitals have reported the results of shock therapy by submitting a special schedule for each patient to the statistical bureau of the Department of Mental Hygiene after the completion of a course of such treatment.

DEMENTIA PRÆCOX

The following analysis is based upon reports received for the first 491 dementia præcox cases. Seventy-seven of the patients involved had already received earlier types of shock therapy, without any improvement in almost half of the cases. The others had relapsed, after varying degrees of improvement. Table 1 describes the outcome of treatment with electric shock.

The first reports were received from only seven hospitals. Two of these hospitals, Pilgrim and Rockland, together reported 332 cases, or 67.6 per cent of the total. The cases were almost evenly divided between the sexes. Of the 491 cases, 23, or 4.7 per cent, were described as recovered after termination of treatment; 126, or 25.7 per cent, were much improved; and 146, or 29.7 per cent, were improved in lesser degrees. A total of 295, or 60.1 per cent, showed some degree of improvement.

The same group of hospitals originally provided a total of 358 patients, who were treated with insulin. Of the latter total, 36, or 10.1 per cent, were recovered; 102, or 28.4 per cent, were much im-

TABLE 1. OUTCOME OF TREATMENT BY ELECTRIC SHOCK OF PATIENTS WITH DEMENTIA PRÆCOX IN THE
NEW YORK CIVIL STATE HOSPITALS

State hospitals	Total		T.	Recovered		Much improved		Improved		Unimproved		Worse		Died						
	M.	F.		M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.					
Buffalo	9	7	16	..	..	..	2	..	2	3	4	7	4	2	6	..	1	1	..	..
Harlem Valley	7	9	16	..	..	..	..	..	1	1	2	..	2	5	7	12	..	1	1	..
Manhattan	7	5	12	..	3	3	..	1	1	6	1	7	1	..	1	..	..	..	..	..
Marcy	34	27	61	1	1	2	8	5	13	14	10	24	10	10	20	1	1	2	..	..
Pilgrim	78	119	197	4	3	7	36	38	74	20	37	57	18	41	59	..	..	..	..	..
Psychiatric Institute ..	31	23	54	7	2	9	4	11	15	2	3	5	18	7	25	..	..	..	..	..
Rockland	76	59	135	..	2	2	3	17	20	29	15	44	44	25	69	..	..	..	..	..
Total	242	249	491	12	11	23	53	73	126	76	70	146	100	92	192	1	3	4	..	..
Per cent	100.0	100.0	100.0	5.0	4.4	4.7	21.9	29.3	25.7	31.4	28.1	29.7	41.3	36.9	39.1	0.4	1.2	0.8	..	..

proved; and 100, or 27.9 per cent, were improved. The percentage of patients reported as recovered after insulin therapy exceeded that following electric shock by 5.3 ± 1.3 , a significant excess in favor of the group treated with insulin. Patients either recovered or much improved constituted 38.5 ± 1.7 per cent of those treated with insulin and 30.3 ± 1.4 per cent of those treated with electric shock, a difference of 9.5 ± 2.2 in favor of insulin shock therapy. It must, therefore, be concluded that treatment with electric shock is not so efficacious as insulin shock.

Compared with the results of metrazol treatment, however, those with electric shock are favorable. Thus, the recovery rate with metrazol was only 1.6 per cent, compared with 4.7 per cent with electric shock. Rates of much improvement were 9.9 and 25.7 per cent, respectively.

Compared with nonshock therapy, the results with electric shock are also favorable. Thus among the same group of hospitals, there were 14 patients with dementia præcox out of a total of 358, or 3.9 ± 0.7 per cent, who recovered within a year after admission, without receiving any form of shock therapy. In the group treated with electric shock the corresponding percentage was 4.7 ± 0.6 . The difference is not statistically reliable, but allowance must be made for the fact that the control group consisted only of first admissions, among whom the average duration of the disease prior to treatment was undoubtedly less than that for the group treated with electric shock. In the New York civil State hospitals, as a whole, there were 48,772 patients with dementia præcox under treatment in 1941. Among this group, there were only 528 recoveries, or 1.1 per cent. With this as a standard, it is found that the recovery rate is significantly greater among patients treated with electric shock. Considering groups described as much improved, a percentage of 25.7 is found among those treated with electric shock and 20.8 per cent among all dementia præcox patients in the New York civil State hospitals, giving a difference of 4.9 ± 1.3 in favor of electric shock.

Table 2 describes the outcome of treatment according to the duration of the psychosis before treatment. The recoveries, with one exception, all occurred among those whose mental disorders had existed less than one year prior to treatment. Here, too, there is a

TABLE 2. OUTCOME OF TREATMENT BY ELECTRIC SHOCK OF PATIENTS WITH DEMENTIA PRÆCOX, ACCORDING TO DURATION OF PSYCHOSIS BEFORE TREATMENT

Duration before treatment	Total			Recovered			Much improved			Improved			Unimproved			Worse			Died		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Number																					
Less than 6 months....	83	93	176	10	8	18	27	40	67	25	26	51	21	17	38	..	2	2	..	..	..
6 to 11 months	30	47	77	1	3	4	7	17	24	8	10	18	14	17	31	..	..	..	..	..	..
1 year	45	37	82	..	..	..	10	9	19	15	14	29	19	14	33	1	..	1	..	..	..
2 years	27	25	52	..	..	..	4	1	5	10	14	24	13	10	23	..	..	..	..	..	..
3 years	12	13	25	..	..	..	..	2	2	5	3	8	7	8	15	..	..	..	..	..	..
4 years	14	8	22	..	..	..	2	1	3	2	1	3	10	6	16	..	..	..	..	..	..
5 years and over	31	26	57	1	..	1	3	3	6	11	2	13	16	20	36	..	1	1	..	..	..
Total	242	249	491	12	11	23	53	73	126	76	70	146	100	92	192	1	3	4	..	..	..
Per cent																					
Less than 6 months....	100.0	100.0	100.0	12.0	8.6	10.2	32.5	43.0	38.1	30.1	28.0	29.0	25.3	18.3	21.6	..	2.2	1.1	..	..	..
6 to 11 months	100.0	100.0	100.0	3.3	6.4	5.2	23.3	36.2	31.2	26.7	21.3	23.4	46.7	36.2	40.3	..	..	..	..	..	..
1 year	100.0	100.0	100.0	..	..	..	22.2	24.3	23.2	33.3	37.8	35.4	42.2	37.8	40.2	2.2	..	1.2	..	..	..
2 years	100.0	100.0	100.0	..	..	..	14.8	4.0	9.6	37.0	56.0	46.2	48.1	40.0	44.2	..	..	..	..	..	..
3 years	100.0	100.0	100.0	..	..	..	..	15.4	8.0	41.7	23.1	32.0	58.3	61.5	60.0	..	..	..	..	..	..
4 years	100.0	100.0	100.0	..	..	..	14.3	12.5	13.6	14.3	12.5	13.6	71.4	75.0	72.7	..	..	..	..	..	..
5 years and over	100.0	100.0	100.0	3.2	..	1.8	9.7	11.5	10.5	35.4	7.7	22.8	51.6	76.9	63.2	..	3.8	1.8	..	..	..
Total	100.0	100.0	100.0	5.0	4.4	4.7	21.9	29.3	25.7	31.4	28.1	29.7	41.3	36.9	39.1	0.4	1.2	0.8	..	..	..

differentiation between those ill for less than six months and those ill for periods varying from 6 to 11 months. The former had a recovery rate of 10.2 per cent, compared with only 5.2 per cent among the latter. The same relation is seen with respect to rates of much improvement, the rate being highest among those with the shorter durations. Since there is an undoubted tendency to understate the duration of the disease prior to treatment, it is certain that the correct rates of recovery and of much improvement among those with short durations are even higher than those derived from the preceding data. The inverse relation between duration of disease and outcome is the same as that found with all other forms of therapy.

Table 3 is designed to show the combined effect of age at beginning of treatment and duration of the disease prior to treatment upon the outcome. It may be noted, for example, that patients aged 15 to 19 years, with a duration of less than six months, had a combined rate of recovery and much improvement of 31.8 per cent. Passing down the diagonal to the right, it is evident that the rate decreases. Taking into consideration the fluctuations due to the small number of patients in some of the cells, it may be said that the declining trend along the diagonal is characteristic. However,

TABLE 3. PERCENTAGE OF DEMENTIA PRÆCOX PATIENTS RECOVERED OR MUCH IMPROVED AFTER ELECTRIC SHOCK TREATMENT, ACCORDING TO AGE AT BEGINNING OF TREATMENT AND DURATION OF PSYCHOSIS BEFORE TREATMENT

Age at beginning of treatment (years)	Duration prior to treatment						
	Less than 6 months	6-11 months	1 year	2 years	3 years	4 years	5 years and over
10-14	....	....	....	....	....	....	....
15-19	31.8	33.3	....	....	....	....	....
20-24	56.5	33.3	20.0	....	12.5	50.0	9.1
25-29	40.4	40.0	29.4	....	....	....	15.4
30-34	44.4	33.3	31.3	....	....	20.0	21.1
35-39	71.4	37.5	33.3	37.5	....	....	....
40-44	60.0	33.3	25.0	66.7	....	....	....
45-49	....	....	....	....	....	....	....
50-54	....	100.0	....	....	....	....	....
55-59	....	....	....	....	100.0	....	....

the trend is due entirely to the factor of duration of disease. Examining the columns, it is difficult to find evidence of any trend with respect to age, taking into consideration random fluctuations due to small numbers. Changes along the rows, however, indicate a declining trend as the duration of the disease increases.

Table 4 correlates the outcome of treatment with the number of applications of electric shock. Those with fewer shocks (i. e. less than 15) had a higher rate of recovery and much improvement than those requiring 15 shocks or more. Obviously this must be due to the fact that the more favorable cases respond more quickly.

Injuries During Treatment

Fourteen of the 491 patients treated with electric shock suffered some injury. This represents 2.9 per cent, an injury rate less than that reported following treatment with metrazol.³ Most of the injuries consisted of slight compression fractures. One of the patients, however, developed minimal pulmonary tuberculosis.

MANIC-DEPRESSIVE PSYCHOSES

Table 5 summarizes the results of the application of electric shock therapy to 142 patients with manic-depressive psychoses, of whom 50 were males and 92 females. Two-thirds of the cases were treated at Pilgrim State Hospital and the Psychiatric Institute. Smaller totals were reported by Harlem Valley, Manhattan, Marcy and Rockland State Hospitals. Of the 142 patients, 47, or 33.1 per cent, were recovered after treatment; 53, or 37.3 per cent, were much improved; and 22, or 15.4 per cent, were improved, giving a total of 122, or 85.4 per cent, who responded in some favorable degree to the treatment. This is superior to the results obtained among patients with dementia præcox. It may also be noted that of 7,523 patients with manic-depressive psychoses treated in the New York civil State hospitals in 1941, only 877, or 10.9 per cent were recovered, compared with 33.1 per cent of those treated with electric shock. The same superiority is found with respect to other degrees of improvement.

TABLE 5. OUTCOME OF TREATMENT BY ELECTRIC SHOCK OF PATIENTS WITH MANIC-DEPRESSIVE PSYCHOSES IN THE NEW YORK CIVIL STATE HOSPITALS, ACCORDING TO DURATION OF PSYCHOSIS BEFORE TREATMENT

Duration before treatment	Total		Recovered			Much improved			Improved			Unimproved			Worse			Died	
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	
Less than 6 months ...	31	33	64	13	13	26	15	11	26	2	4	6	1	4	5	..	..	1	1
6-11 months.....	7	32	39	1	11	12	4	14	18	2	3	5	..	4	4	..	..	..	..
1 year	6	12	18	2	2	4	1	4	5	2	4	6	1	2	3	..	..	..	..
2 years	2	7	9	..	2	2	..	2	2	2	1	3	..	2	2	..	..	..	..
3 years .....	..	1	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..
4 years	2	1	3	..	..	..	1	..	1	1	1	2	..	..	..	..	..	..	..
5 years and over	2	6	8	1	2	3	..	..	..	..	..	..	1	4	5	..	..	..	..
Total	50	92	142	17	30	47	21	32	53	9	13	22	3	16	19	..	..	1	1
Per cent	100.0	100.0	100.0	34.0	32.6	33.1	42.0	34.8	37.3	18.0	14.1	15.4	6.0	17.4	13.4	..	..	1.1	0.7

TABLE 6. OUTCOME OF TREATMENT BY ELECTRIC SHOCK OF PATIENTS WITH INVOLUTIONAL DISORDERS IN THE NEW YORK CIVIL STATE HOSPITALS, ACCORDING TO DURATION OF PSYCHOSIS BEFORE TREATMENT

Duration before treatment	Total			Recovered			Much improved			Improved			Unimproved			Worse			Died		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Less than 6 months ...	5	14	19	2	3	5	3	6	9	..	3	3	2	2	2	..	..	..	..	..	..
6-11 months	7	20	27	1	8	9	3	8	11	..	3	3	3	1	4	..	..	..	..	..	..
1 year	4	4	8	1	..	1	1	2	3	1	2	3	..	..	..	..	..	..	1	..	1
2 years	1	9	10	..	..	..	..	4	4	1	3	4	..	2	2	..	..	..	..	..	..
3 years	2	6	8	..	3	3	..	1	1	..	..	..	2	2	4	..	..	..	..	..	..
4 years	3	4	7	..	..	..	..	1	1	2	2	4	..	1	1	..	..	..	1	..	1
5 years and over	2	4	6	1	..	1	..	2	2	..	..	..	1	2	3	..	..	..	..	..	..
Total	24	61	85	5	14	19	7	24	31	4	13	17	6	10	16	..	..	..	2	..	2
Per cent	100.0	100.0	100.0	20.8	23.0	22.4	29.2	39.3	36.4	16.7	21.3	20.0	25.0	16.4	18.8	..	..	..	8.3	..	2.4

INVOLUTIONAL DISORDERS

Eighty-five patients with involutional disorders were treated with electric shocks (Table 6). Of this total, 37 were treated at Pilgrim and 22 at Rockland. Buffalo, Harlem Valley, Marcy, the Psychiatric Institute, and Willard reported small totals of such cases. Of the 85 patients, 19, or 22.4 per cent, were recovered; 31, or 36.4 per cent, were much improved; and 17, or 20.0 per cent, were improved. The recovery rate is less than that reported in connection with manic-depressive psychoses, but exceeds the rate of recovery among patients with dementia præcox treated with either insulin or electric shock, and also exceeds the recovery rate among all patients with involutional disorders. During the year 1941, there were 4,076 patients with involutional disorders under treatment in the New York civil State hospitals, of whom only 240, or 5.9 per cent, were reported recovered during the year.

CONCLUSIONS

This review of the results of electric shock therapy permits the following conclusions:

1. The results of such treatment of patients with dementia præcox, measured in terms of recovery and much improvement, are not so good as corresponding results with groups of patients treated with insulin.
2. The results are more favorable than those produced by metrazol.
3. Rates of recovery and of improvement among patients with dementia præcox following electric shock therapy are superior to those shown by control series.
4. Electric shock is especially efficacious among patients with manic-depressive psychoses and involutional disorders.

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AN EVALUATION OF THE FACTOR OF DEPRESSION OF BRAIN METABOLISM IN THE TREATMENT OF SCHIZOPHRENIA*

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The present investigation was undertaken in order to evaluate the significance of the depression of brain metabolism in the treatment of schizophrenia, because biochemical analyses have disclosed that all the shock therapies of schizophrenia subject the brain to a period of metabolic depression.¹ With some of these treatments, however, the therapeutic significance of the cerebral metabolic depression *per se* could not be determined because the cerebral metabolic depression was complicated by other factors, for example, the stimulatory effects of the electric current or metrazol. In this investigation, the inhalation of undiluted nitrogen was used as a means of depressing brain metabolism. By this method, the uncomplicated effects of depression of brain metabolism could be evaluated.

METHOD

The method of administration of nitrogen inhalation has been previously described.² In most instances, patients were submitted to at least 40 treatments³ unless they exhibited distinct improvement before the fortieth treatment. An occasional patient received as many as 50 treatments when improvement was in progress. The patients treated were diagnosed as schizophrenics by the staff at Brooklyn State Hospital.

The patients were divided into two groups: the first with histories of illness of less than one year duration; and the second with histories of duration longer than one year. Of the latter group, 19 had been treated with insulin or metrazol or both.

The results of these treatments were classified as follows: 1. *Recovery*: Patients who do not exhibit any psychotic symptoms and who have clear insight into their mental illnesses. 2. *Social remission*: Individuals who no longer show any psychotic symptoms and who have partial insight into their conditions, insight which is not so complete as in the cases of recovery. 3. *Essential*

*Report of a research aided by a grant from the John and Mary R. Markle Foundation to one of the writers (H. E. H.).

improvement: Those who do not suffer from any delusions or hallucinations, do not show psychotic symptoms but who do not possess insight. 4. *Partial improvement*: Patients who reveal improvement in their general conduct and are consequently more easily cared for. 5. *Unimproved*: Patients whose mental condition remains unchanged.

RESULTS

Ninety-nine patients received the full course of 40 treatments. Sixty-five of these patients were ill for less than one year. As a result of treatment, 30, or 46 per cent, were improved; and 22, or 34

TABLE 1. DEMENTIA PRAECOX CASES
Duration less than one year

	Recovery	Social remission	Essential improvement	Partial improvement	Unimproved	Total
Catatonic	2	5	4	1	25	37
Paranoid	1	1	5	6	10	23
Hebephrenic			4	1		5
						65
Duration more than one year						
Catatonic	1	1	1	5	18	26
Paranoid				1	5	6
Hebephrenic				1	1	2
						34

per cent, were paroled (Table 1). Thirty-four patients were ill for more than one year; and of this group, 10, or 29 per cent, were improved; and three, or 9 per cent, were paroled. Thus, 25 of 99 patients with schizophrenia who were treated are now on parole. Short descriptions of these patients are presented in Table 2.

TABLE 2. RÉSUMÉS OF CASES OF DEMENTIA PRAECOX PATIENTS PAROLED
SUBSEQUENT TO NITROGEN INHALATION THERAPY

E. B., diagnosed as hebephrenic dementia praecox. She had been ill one month, with ideas of reference, vague persecutory ideas and impulsive behavior. Subsequent to hospitalization and treatment she quieted, became more composed and showed improved judgment. She was paroled as essentially improved.

- E. S., diagnosed as paranoid dementia *præcox*. For a year, she had been impulsive and antagonistic toward her husband and was difficult to manage. She had mild transitory delusional ideas. Upon hospitalization and treatment, she became quieter, more amiable and cooperative and was paroled as essentially improved.
- A. T., diagnosed as hebephrenic dementia *præcox*. For one month prior to admission, he had been retarded and mildly stuporous. With hospitalization and treatment, he became active, bright and alert and was paroled as essentially improved.
- E. H., diagnosed as catatonic dementia *præcox*. For six months, she had been quiet and at times mute and retarded. With hospitalization and treatment, she became active, interested and sociable and was paroled as a social remission.
- A. K., diagnosed as catatonic dementia *præcox*. Seven months prior to admission, he had become confused, mute and resistive. With hospitalization and treatment, he became more alert, active and was paroled as a social remission.
- J. S., diagnosed as catatonic dementia *præcox*. Two months before admission, he had become retarded, suspicious and seclusive. He had vague paranoid ideas. After hospitalization and treatment he became bright, cooperative, active and was paroled as essentially improved.
- M. D., diagnosed as catatonic dementia *præcox*. Three months prior to admission, she became resistive, retarded and was unable to take care of herself. After hospitalization and treatment, she became bright, cooperative, active and was paroled as a social remission.
- E. E., diagnosed as paranoid dementia *præcox*. Seven months prior to admission, she became very agitated, had marked ideas of persecution and annihilation. Subsequent to hospitalization and treatment, she became composed, cooperative and was paroled as essentially improved.
- S. T., diagnosed as paranoid dementia *præcox*. Six months prior to admission, she developed vague persecutory ideas about her sister. She was overactive and showed poor judgment. After hospitalization and treatment, she became more quiet, tractable and was paroled as essentially improved.
- C. M., diagnosed as catatonic dementia *præcox*. One month prior to admission, she became excited, screamed and fainted in the street. After a brief course of treatment, she became quiet and was paroled as essentially improved.

- H. G., diagnosed as paranoid dementia praecox. Two weeks prior to admission, he began having ideas of infidelity on the part of his wife. He became bewildered and self-absorbed. After hospitalization and treatment, his thinking improved, he was more interested, and he was paroled as essentially improved.
- D. P., diagnosed as catatonic dementia praecox. One month prior to admission, she had become hysterical and then withdrawn and disinterested. After hospitalization and treatment, she showed slight improvement in activity and interest. She was paroled as essentially improved.
- L. R., diagnosed as paranoid dementia praecox. One month prior to admission, he developed ideas that he was responsible for all the evil in the world. After hospitalization and treatment, he gradually relinquished this idea. He became sociable, friendly and was paroled as essentially improved.
- A. C., diagnosed as catatonic dementia praecox. Three months prior to admission, he had become insulting, threatening, and very irritable to his family. After hospitalization and treatment, he became calm, cooperative and amiable. He was paroled as essentially improved.
- D. P., diagnosed as hebephrenic dementia praecox. Four months prior to admission, while in the army, he became confused, delusional and withdrawn. After hospitalization and treatment, he became active, sociable and was paroled as essentially improved.
- R. W., diagnosed as catatonic dementia praecox. Four months prior to admission and shortly after childbirth, she became depressed, delusional and self-accusatory. After termination of treatment, she was paroled as a social remission.
- A. R., diagnosed as catatonic dementia praecox. She recovered from her symptoms of mental illness and gave up her delusions of a religious nature. However, her insight was inadequate, and she was paroled as essentially improved.
- O. S., diagnosed as catatonic dementia praecox. She was impulsive and actively disturbed. She recovered from her mental symptoms, became quiet, tractable, well behaved, and showed partial insight into her condition. Consequently, she was paroled as a social remission.
- I. M., diagnosed as catatonic dementia praecox. He suffered from auditory hallucinations and expressed many delusional ideas of religious nature. He recovered from all of these symptoms. As he appeared

to have excellent insight into his condition, he was paroled as recovered.

J. S., diagnosed as catatonic dementia præcox. During his mental illness, he had a definite paranoid trend. Following treatment, he gave up all of his delusional ideas and no longer showed any mental symptoms. He had good appreciation of his condition and was paroled as recovered.

J. B., diagnosed as catatonic dementia præcox. During her mental illness, she showed marked regressive tendencies and at times was impulsive. Following treatment, she gradually recovered from her mental symptoms and developed fair insight into her condition. She was accordingly paroled as a social remission.

C. S., diagnosed as catatonic dementia præcox. During his illness, he had been excited and overactive. Within a week after the treatment was instituted, he gradually became more quiet, his mental symptoms disappeared and he developed good appreciation of his condition. As a result, he was paroled as recovered.

A. G., diagnosed as paranoid dementia præcox. His original mental condition was characterized by auditory hallucinations and a delusional trend to which he reacted by marked depression. Following the institution of treatment, he showed gradual improvement, gave up his delusional ideas, no longer hallucinated and developed excellent insight into his condition. He was accordingly paroled from the hospital as recovered.

M. R., diagnosed as paranoid dementia præcox. He was ill for three months prior to hospitalization. He thought his wife was having sexual relations with other men, was tense, impulsive and irritable. Shortly after admission he lost his delusions and was paroled as a social remission.

M. G., diagnosed as paranoid dementia præcox. He was tense, restless and impulsive. After treatment, he quieted and was paroled as essentially improved.

Eleven patients did not receive the full course of therapy and they are not included in the analysis of the results. Five of these patients developed some intercurrent physical condition which prevented the completion of the treatment. Three of these five lost weight, and two suffered from respiratory infections. Following a second treatment, another patient developed two convulsive seiz-

ures from which he promptly recovered without residual neurological symptoms. Treatment in five other patients was stopped because they were so actively disturbed that it was practically impossible to continue the administration of nitrogen. On an average, these 11 patients received less than 25 treatments. Aside from these occurrences there were no complications in the course of administering 4,777 treatments.

DISCUSSION

In order to evaluate the results of the nitrogen inhalation therapy for schizophrenia it is necessary to compare them with those of other treatments. A comprehensive analysis of the results of the insulin treatment of schizophrenia was made by Malzberg.⁴ An equally good study of the results of metrazol therapy has been prepared by Pollock.⁵ Eighty per cent of the patients treated with insulin hypoglycemia who were ill for less than one year improved; and 62 per cent, ill from one to five years, improved. The comparable results with metrazol are 70 per cent and 33 per cent respectively. The results obtained on patients not subjected to any form of shock therapy are 27 per cent and 15 per cent for illnesses of less than one year and of one to five years respectively. (See Table 3.) It may, therefore, be seen that on a basis of improvement the results with nitrogen inhalation therapy are not so good as those obtained with metrazol or insulin. On the other hand, the results with nitrogen are better than those obtained on patients not subjected to shock therapies of any kind.

TABLE 3. A COMPARISON OF THE RESULTS OF PATIENTS RECEIVING THE VARIOUS FORMS OF SHOCK THERAPIES WITH CONTROLS NOT SUBJECTED TO SHOCK THERAPIES

	Nitrogen inhalation	Insulin	Metrazol	No shock therapy
Percentages of patients improved				
Less than one year	46	80	70	27
One to five years	34	62	33	15
Percentages of patients paroled				
Less than one year	34	54	42	10 to 20
One to five years	9			

The number of patients paroled is more important than the number improved, which includes patients not improved sufficiently to leave the hospital. When the results of the nitrogen inhalation therapy are evaluated on a percentage basis of patients paroled and are compared with the number of patients paroled in the same hospital after insulin or metrazol, it was found that 34 per cent were paroled after nitrogen therapy, 54 per cent after insulin, and 42 per cent after metrazol. An analysis made by Rivers and Bond⁶ on several series of patients not treated with shock therapies revealed that from 10 to 20 per cent of these patients were paroled. The percentage of patients paroled after nitrogen inhalation treatment is larger than that paroled without any shock therapy and is less than that of patients after insulin. The number of parolees with nitrogen inhalation approximates that with metrazol; but from a technical point of view the nitrogen inhalation therapy is safer than the metrazol. In contrast with the present results, in which 4,777 treatments of the nitrogen inhalation therapy were administered without any complications, the effects of metrazol convulsions in producing fractures of bones and dislocations of joints are well known.

From these results, as measured by paroled patients, it may be seen that depression of brain metabolism has a definite effect on the course of schizophrenia. Both the percentage improved and the percentage paroled of patients receiving nitrogen inhalation are greater than are similar percentages of patients not receiving shock therapies. The fact that the percentages paroled with metrazol and nitrogen inhalation are less than those obtained with insulin may be ascribed to the chief difference between these treatments, that is, the duration of the depression of brain metabolism. With insulin the depression is much longer than with the other shock therapies.

The observation that a short period of anoxia *per se* exerts a favorable effect on the course of schizophrenia demonstrates rather conclusively that anoxia does play a significant rôle in the alleviation of this disease. Insulin, metrazol, and nitrogen inhalation therapies all produce depression of cerebral metabolism either by occasioning a lack of cerebral foodstuff (blood sugar) or by a decrease in oxygen content of the blood. The chief difference be-

tween the various therapies is one of duration of cerebral depression. The higher percentage of recovery obtained with insulin may be chiefly due to a more prolonged depression of cerebral metabolism. The results on the percentage of paroled patients with nitrogen inhalation are comparable with those obtained with the metrazol therapy. The similarity of these results may be explained if the anoxia is important therapeutically, since the duration of the anoxia is similar in both instances. It should be obvious that for conclusive results on a problem of such importance many more patients should be subjected to anoxia and particularly to anoxia of longer duration. In addition, those patients already benefited therapeutically should be examined periodically.

MANIC-DEPRESSIVE PSYCHOSES

Five patients with manic-depressive psychoses received an average of 30 treatments. Of these five patients, one exhibited recovery, two essential improvement, one partial improvement, and one remained unimproved. The patients with manic-depressive psychoses who were treated were too few in number to permit the drawing of conclusions from the results obtained.

SUMMARY AND CONCLUSIONS

This investigation was undertaken to determine the effect of depression of brain metabolism in the course of schizophrenia. To evaluate the effect of depression of brain metabolism without any direct stimulatory effects on the brain, patients with schizophrenia were subjected to the nitrogen inhalation therapy. Sixty-five patients ill less than one year and 34 ill for more than one year were treated. Of the patients ill less than one year, 46 per cent were improved and 34 per cent paroled. Of those ill longer than a year, 34 per cent were improved, and 9 per cent were paroled.

From an analysis of these results and a comparison of those obtained with other treatments it may be concluded: (1) That the depression of brain metabolism exerts a desirable effect on the course of schizophrenia. (2) That the duration of depression is of importance. In the treatment of schizophrenia, the longer periods of depression produced by insulin hypoglycemia are more valuable than the shorter ones caused by nitrogen inhalation or metrazol.

ACKNOWLEDGMENT

The writers wish to thank Dr. Mark Zeifert for organizing the treatments, Dr. Arthur Suffin for administering them and Dr. Leonard R. Sillman for the supervision of the patients.

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EDITORIAL COMMENT

TRAGEDY UNDERSCORES THE OBVIOUS

An overworked kitchen employee in Oregon State Hospital sent a patient to a storeroom for milk powder on November 18. The patient brought back an insecticide instead, and the following night 47 patients died, and more than 400 were critically ill, as the result of eating a flouride mixed with scrambled eggs. As the New York State Department of Health has pointed out, such a mass poisoning should be impossible here if the provisions of the Sanitary Code are observed. Adopted after food poisoning incidents which fortunately were less serious than that in Oregon, the New York code not only requires plain labelling of highly toxic substances with the word "Poison," the symbol of the skull and crossbones and directions for administering appropriate antidotes, but it also calls for the artificial coloring of all insecticides containing flourides in such fashion that no person whose intellect was functioning normally could either mistake them for foodstuffs or eat—unwarned—any food prepared from them. Observance of the provision of this State's code which prohibits the storage of any such poisons in places where foods are kept provides for an additional safeguard.

In the absence of such provision, the mistake which led to the Oregon tragedy is not remarkable. The news reports would indicate also that it cannot fairly be charged to the fact that it was a patient who went to the storeroom for the powdered milk. An employee unfamiliar with the layout of the storage space, a nurse, a staff physician, a hospital superintendent, might have made the same mistake. Those responsible for the administration of large mental institutions, however, even those conforming to such strict sanitary code regulations as New York's, cannot fail to feel growing apprehension as a result of what happened in Oregon.

The shortage of employees, which was acute a year ago, has created a far greater problem since America's active participation in the war. There is no relief in sight. Women cannot fill all of the vacancies left by men who have gone into the armed services; and women workers, attracted as they are by high war industry wages, are none too plentiful for State hospital service. Opposition of the remaining employees themselves is either preventing or strictly limiting such emergency help as might be expected from the assignment of conscientious objectors to mental hospital jobs—an opposition not too difficult to understand if one appreciates that the conscientious objector, like the mental patient himself, has become socially unacceptable to the community of which hospital employees are members.

Everybody knows what the institutions have been forced to do in an attempt to solve this problem—make increased use of working patients in the place of absent employees. Fortunately, under such sanitary codes as that of New York State, mistakes similar to that made with the Oregon poison are most unlikely, even with large percentages of patients among the kitchen help. But the chances of waste and spoilage, of the serving of improperly prepared food, of the cooking of decomposing or contaminated food, are vastly increased by this apparent wartime necessity. The disadvantages of employing patients in institution kitchens have long been plain; and such administrators as Dr. John L. Van de Mark, superintendent of Rochester State Hospital, have recommended repeatedly that the Department take steps to end such employment. Lack of funds has stood in the way.

This brief discussion might seem to underscore the obvious. But the obvious already has been blackly underscored—by death in Oregon.



A STUDY IN AMERICAN WEAKNESS

A year after Pearl Harbor, it can still be said that our enemies' chief strength lies, not in combating the power of our own democracy, but in exploiting its elements of weakness. If our foes' attacks are to be repelled, it might be well for physicians of the mind to devote some study to the broad unconscious bases of that weakness. The days in which American democracy took shape were not unlike our own. Our society, as we knew it from the 1860's to the 1930's, emerged from the Civil War, the greatest trial before the present one to which this nation ever has been subjected.

There were giants among the leaders of those days, the melancholy, towering Lincoln, genius of the common man of the North; Lee, the heart and intellect of the aristocratic South; Grant, the soldiers' symbol of an iron stubbornness. From men such as these and from the men they led, came, we may feel, much of the strength which shaped the heritage of Magna Charta and the Declaration of Independence into the America we used to know.

But there were other forces among the great and the near-great: Thaddeus Stevens, the incarnate spirit of a bloody vengeance; Benjamin Butler, symbol of military misrule and political corruption; Henry Ward Beecher, personification of whatever in America responded to his resounding cant. There, too, was Walt Whitman, one of the most gifted of the world's great psychopaths, voice of concepts of democracy which were just beginning in his day to find articulate expression. From such men as these, much of

whatever has been weak in our political and social structure has been inherited, trends toward cruelty, hypocrisy and doubledealing, trends toward a biologically unsound, masochistically conceived sentimentalism which encouraged the growth of an unhealthy psyche under the lofty names of comradeship and brotherhood. These latter trends toward psychopathy, always beneath the surface, always misunderstood, derive their strength from the primeval layers of the unconscious. In their presence, the soft voice of the intellect has, as yet, had little hearing. Unsound sentimentality has grown; the little path which Whitman traced among leaves of grass in the psychopathic unconscious joined at length the broad highway which led to betrayal, disaster and shame at Hawaii.

Whitman had a great and still little-understood part in framing the North which plunged into the Civil War and the united nation which emerged from it. If his influence was slow in growth, it was, nonetheless, eventually tremendous. Whitman's spirit of "comradeship" was not invoked by the North in behalf of the beaten South; it was not expressed by the native for the immigrant, or by the fortunate for "exploited" men of later days; but it played its part in the development of that trusting naïvete which had a place in America's international outlook before Pearl Harbor. Interested readers will find in Hugh l'Anson Fausset's recent biography of Whitman* a wealth of first-hand information on the sources of many elements in the modern American character which must be regarded as weaknesses.

In any appraisal, such as this, of a writer's character and influence, it is well to examine first his standing in literature. By the critics, Whitman has been extravagantly praised, bitterly reviled and sternly condemned; but his place among the poets of our tongue has gradually improved since "Leaves of Grass" first appeared in 1855. In the beginning, his work was little regarded by contemporaries. Few, even members of his own family, read it. His mother, whose favorite he was, confessed that she could not understand the poems. Emerson saw merit in some of his earlier verses and wrote an encouraging letter to him. He was disillusioned when he met Whitman and noted his lack of culture, but he did not withdraw the letter which Whitman was using to advertise his book. Dr. R. M. Bucke, an eminent Canadian psychiatrist of the last century, was an admirer of Whitman. He often visited him and published a biographical sketch. Though he could not have failed to note his idiosyncrasies, he, like biographers who were not versed in psychiatry, saw them as marks of genius. Max Nordau, a vitriolic French critic at the end of the century, had no hesitation in de-

*Walt Whitman: Poet of Democracy. By Hugh l'Anson Fausset. 320 pages. Cloth. Yale University Press. New Haven. 1942. Price \$3.00.

nouncing Whitman as a degenerate and a lunatic. John Burroughs recognized him as possessed of a dual character, a nature wonderfully gentle, tender and benignant; but Burroughs saw, after 30 years of companionship, that: "The home, the fireside, the domestic allurements are not in him . . . The begetter, the Adamic man takes the place of the lover . . . Love as in other poets is not in him."

Mr. Fausset is fully cognizant of these contradictions. He repeatedly refers to the poet's dual nature but he must see that it was more than dual. It was multiple. Whitman's many-sidedness was a trait affording useful capacities—up to a certain limit if well-balanced—but in him it was a lack of cohesion, a schizoid cleavage which accounted for the oddities and contradictions in his writings and his character. His habit of tramping about the country, going south and west, perhaps as far as California, about which he left little record, has often been commented upon. Summers spent alone in the then sparsely inhabited region of eastern Long Island, his odd appearance and dress, all point to psychopathic traits. His personality had never matured, his nature was chameleon-like, he was all things to all men, but had not developed an integrated personality for himself. He was a vagabond, a ne'er-do-well, always on the edge of poverty and not unwilling to accept charity. Except for assistance from friends, his last days would have been passed in the poorhouse.

The poet, in order to portray human emotions, must be able to feel them first; the great poets were broad and inclusive in their sympathies, hence had a universal appeal to mankind. While Whitman maintained he loved everyone, even the strangers whom he encountered on the street, it is believed by some critics that this was an assumed pose and that in reality he could love no one but himself. Certainly he was lacking in one important respect and that was the capacity for romantic love. One looks in vain for a definite reference to an appreciation of the spiritual qualities of woman. To him, woman's value was only to bear and rear children, reducing her to the level of a broodmare, one critic has said. His ideal of womankind was the brawny, muscular, athletic type. She must be able to run, swim, wrestle, strike, to be bold and arrogant. In other words, she must be masculine. She must measure up to his ideal of the "comrade." Whitman's homosexuality can scarcely be denied or camouflaged. While Fausset does not make use of the term, he evidently is not blind to the significance of numerous passages in the verses which point to it. Not only Whitman's writings but his biography point unmistakably to that defect.

Now, we are in a position to recognize the type to which he belonged and to classify his psychopathic traits. His emotional development was arrested at a juvenile level. He never succeeded in detaching himself from depend-

ence on his mother or the mother imago. He never became emotionally mature. His conflicts were those commonly met with in immature adolescents.

His personality was illy-defined; vague and contradictory tendencies are evident. His dominant trait was narcissism. His love for himself and the overestimation of his importance, not only in the world but in the "Cosmos," sounds, in passages, like the ravings of a parietic: "I know I am august, I do not trouble my spirit to vindicate itself or be understood . . . I exist as I am. That is enough." "Divine am I, inside and out, I make holy whatever I touch or am touched from, the scent of these armpits aroma finer than prayer." "I am an acme of things accomplished, and an enclosure of things to be."

The Jehovah complex is evident in many passages as: "Taking myself the exact dimensions of Jehovah" and in reference to divinity in the line just quoted he proclaimed his intention to create a new race of men. His identification of himself with Christ is suggested in a number of passages. He heals the sick, he hastens to the bedside of the dying man, "the physician and the priest may go home" . . . "look with a separate look on my own crucifixion and bloody crowning." Other indications suggestive of schizophrenia could be pointed out.

In every large mental hospital, there may be found patients who occupy their time in writing long lists of disconnected words or phrases with tiresome repetition, sometimes many pages at a sitting. It is indicative of schizophrenia and the individual is usually found to present considerable emotional deterioration. We see that tendency in Whitman. In numerous writings the tedious enumeration of objects occurs, sometimes objects of nature, sometimes anatomical parts of the human body as "Head, neck, hair, ears, drop and tympan of the ears . . . mouth, tongue, lips, teeth . . . wrist and wrist joint, hand, palm, knuckles, thumb" and so on for 28 lines in one poem. One critic, describing such writing as senseless and conveying almost no meaning, compares it to an artist who, wishing to portray the human body, paints its parts detached—arms, legs, fingers, toes, scattered about in an anatomical museum. The explanation seems to be that Whitman finds difficulty, under those circumstances, in thinking comprehensively and portraying the complete figure as the artist would pose and paint it. Emerson, though he admired some of Whitman's writings, said of verses like those just mentioned that they reminded him of an auctioneer's catalogue of the contents of a warehouse. Some of Whitman's admirers defend such writing on the supposed ground that it lends force to the description, whether it be of a landscape or the human body. That cannot be true for Whitman failed to assemble the parts into a unified whole, but left them on the reader's hands, as it were, gruesome objects fit only for the morgue.

There are other traits and attitudes of his that would contradict the suggestion that Whitman was a schizophrenic. Throughout his life, he was interested in people. He tramped the highways and pavements to observe people in all walks of life, so he said, their habits and interests. He identified himself with them all—the prisoner at the dock, the handcuffed mutineer, the youngster taken for larceny who was tried and sentenced, the convict. “I do not ask the wounded person how he feels. I, myself, become the wounded person.” His capacity for sympathy for the afflicted and for helpless creatures cannot be doubted. The poem beginning, “Out of the cradle endlessly rocking,” is thought by some to be an extraordinary portrayal of sympathy and so it may be but it is not directed to a human being but to a nesting bird whose mate disappeared and never returned. Toward human beings, there are occasional expressions of sentiment that are referred to as love, but invariably the reference is to comrades. Mr. Fausset mentions one instance which has been pointed out by some admirers as evidence of the poet's capacity for romantic love. It is the poem entitled “Once I Passed Through a Populous City,” in which a woman clung to him at parting with sad eyes and tremulous lips. This poem, however, in its original form referred to his parting, not from a woman, but from a man.

Perhaps a reference should be made to Whitman's preoccupation with death. It is referred to again and again—“the delicious word death.” Toward the end of his life when his mausoleum was being erected in the cemetery at Trenton, Whitman delighted to spend a large part of the time there, sitting and talking with the stonemasons.

It is not our judgment that Whitman suffered from schizophrenia; such an opinion could not be supported. But that he manifested psychopathic traits and was near the borderline of mental derangement seems to be a justifiable statement. It is said that one brother had a frank case of dementia præcox, and another was mentally deficient. That biological tendency in his family may be given such importance as one or another reader is inclined to accord it. Whitman was said to have been devoted to his mother. We have no real knowledge of her character or her influence upon her children. He refers to her as a “perfect mother,” which, of course, throws light only upon the devoted attitude of the son.

Mr. Fausset has presented an intriguing narrative of a character that was no more morbid perhaps than was Edgar Allen Poe. Though Whitman lacked Poe's genius he made a contribution to English literature by adopting a form of verse more vigorous and virile than the metrical verses and rhymes that had been carried to extremes in the lyrical poems popular in the Victorian period. However, what he writes is not blank verse as are the Shakespearean plays. Whitman's writing partakes in selected passages

somewhat of the dignity and force of *Macbeth* and *Hamlet* but is raw, crude, rough and almost wholly lacking in grace. Mr. Fausset's insight into Whitman's character was gained by a residence with him of about two years; and he is more tolerant of the poet's crudities than some others who have written about him. With this reservation in mind, one may heartily recommend the Fausset biography as throwing a discerning light upon one whose place in literature is becoming more and more secure and whose influence on America's character has been vastly underrated. During his lifetime, Whitman had to endure the neglect and ostracism which is the expected fate of the literary or scientific pioneer; but in his latter years he was not without a considerable following of admirers. More recently, we may appreciate not only the extent to which his style is being imitated by lesser lights, but may attempt to measure, as well, the great but subtle influence his life, his writings and ideals have had on the structure of our times.

Not all of Whitman was weakness. This essay at interpretation would have missed its aim if it were to convey the impression that Whitman's contribution to American life was entirely evil. If Whitman glorified the "Adamic man, the begetter," he did his part to tear down the Puritan and Victorian edifice of prudery; if he overstressed the homosexual components of interpersonal relationships, identification with and understanding of one's own sex is still an indispensable part of the normal person's equipment; if his narcissism reached psychopathic proportions, enlightened regard for the self is still necessary for the healthy and successful individual. The weaknesses of the "poet of democracy" were the weaknesses of emotional immaturity, as they are the weaknesses of the democracy in whose formation he played so important a part. Misdirected instinct, displaced sentiment, schizoid dissociation, the Jehovah complex have had their rôles in the life of our democracy as in that of its poet. Those who believe that for our own defense we must study our weak points as well as our strong, would do well to ponder the life of Walt Whitman.

BOOK REVIEWS

Self-Analysis. By KAREN HORNEY, M. D. 309 pages. Cloth. W. W. Norton and Company, Inc. New York. 1942. Price \$3.00.

Dr. Horney is a distinguished psychoanalyst, has written several books which had a popular reception and is, withal, a voluminous writer. She might be defined, perhaps, as a dissenter. She is likely to be found in the left wing. In a previous work, "New Ways in Psychoanalysis," she takes issue with the Prophet himself and presumes to set the All-Highest right when his presentation does not harmonize with her views. Not long ago, she was prominent in a revolt and secession from the American Psychoanalytic Association and in the establishment of a new organization.

This reviewer does not presume to sit in judgment or to call names. It should be remembered that dissenters have sometimes been right or partially right and occasionally have started useful reforms. One with Dr. Horney's ideals and aspirations should not shrink from criticism. She probably does not. She has doubtless heard it many times and from many sources, and there are admirers who hold that she can defend herself adroitly. However that may be, we have now before us a new book by Dr. Horney which deserves thoughtful study.

"Self-Analysis" is concerned with the prospect or the hope that individuals, after some preliminary analysis by a professional teacher, may carry on the work alone. The author is careful not to commit herself too dogmatically as to the probable success of such a procedure. Her statements are rather tentative and suggestive. However, the advertisement on the dust jacket would lead the casual reader to believe that self-analysis is a practical procedure. The ability to analyze one's self presupposes the possession of faculties that are rare—courage, insight, determination and persistence. Other prerequisites also must be possessed by the would-be self-analyst—the ability to see one's self objectively and overcome the defect of psychological blind spots.

It must indeed be rare to encounter a person who possesses all of these character traits and yet who is not satisfied with life as he has lived it and hopes for better things to the extent that he would undertake self-analysis. If one is looking for an interesting discussion on psychoanalysis, he will find it here, and, also, even the experienced psychoanalyst will get inspiration and enlightenment from Dr. Horney's wide clinical experience. For purposes such as these, the book may be recommended; but for the ordinary layman, wandering through a book-stall and considering the purchase of this

book with the expectation that he could assume the dual rôle of analyst and analysand, only disappointment would be the lot. Self-analysis is not, has never been and never will be practical for the "intelligent layman."

Psychology of the Child. Mental and Physical Growth. By JOSEPH WILLIAM NAGLE, Ph. D. 530 pages. Cloth. The Ronald Press Company. New York. 1942. Price \$3.25.

Child psychology, as the author points out, has grown during the past two decades. The author's illustration in his preface that formerly a two-hour-a-week course was sufficient but that now a three-hour-a-week course is needed to cover the material of child psychology hardly does justice to the growth of the field in the mind of the average reader, although the addition of one hour to the curriculum of a modern college probably signifies a tremendous advance to college professors.

The present volume attempts to report a large number of psychological experiments which throw light on the growth and development of the child. Out of 530 pages, 402 are devoted to the reports of these experiments. The clinical aspects of the field are represented by a chapter of 37 pages on "Types of Exceptional Children," which contains discussion of a few of the problems of childhood, and a final chapter of 25 pages on mental and physical hygiene. Diagnostic procedures do not receive much attention. An historical introduction, tables, illustrations, and bibliographies make up the rest of the book.

The text follows in a general way the chronological development of the child. From behavior before and shortly following birth, the author proceeds through various stages of motor, perceptual, intellectual, and physical growth of the child, each field making up one chapter. He then discusses learning, forgetting, speech, personality, social development, motivation, and incentive. The various theories of play are reviewed. At the end of each chapter, is a good summary of the contents of the chapter.

The author states that his purpose is to present an up-to-date survey of the present status of child study. No systematic emphasis has been placed on the experimental data, and he announces that his treatment of the material is eclectic. Conflicting views and experiments are carefully presented and very ably discussed. All material is well documented.

The danger of eclecticism, however, lies in the possible loss of perspective and continuity. A mere collection of experiments from widely divergent points of view will become confusing unless the compiler is capable of providing the necessary perspective. In the present work, the author attempts to do this by summarizing the experiments at the end of each chapter. The summaries add materially to the value of the book.

A statement made in the introduction probably needs some qualification. The author says: "A further hindrance to the clear formulations of child problems was the introspective method . . . The method of introspection which was the most important method in experimental psychology necessitated the use of complex language . . ." It is not clear to what type of introspective method the author is referring, since the method has been used by many men in the past and is still in use. Historically, Titchenerian introspectionism represented the most refined use of the method, but it existed simultaneously with other systems of thought. The controversies in the past about the introspective method are evidence that it was neither the most important method nor was it necessarily any more an obstacle to child psychology than other ideas existing at the time. The author would have done well to have clarified this statement for the sake of accuracy.

The chief criticism of the book arises from the author's failure to define and delineate the field of child psychology. He very properly stresses the interdependence of various sciences in studying children's problems, but nowhere does he say what child psychology is. Nevertheless, he uses the term throughout his book in the sense of a special science. In the introduction, where he states he is giving a history of child psychology, it is found that he has in reality given a history of child care and sociological attitudes toward the child. This failure to delineate the field is especially serious in a book that leans so heavily on eclecticism. It is a failure which detracts considerably from an otherwise good college text.

Children's Behavior Problems. Vol. II. Relative Importance and Interrelations Among Traits. By LUTON ACKERSON. 570 pages. Cloth. The University of Chicago Press. Chicago. 1942. Price \$5.00.

The present book represents a continuation of the author's work published in 1931. In the first volume, 5,000 consecutive cases coming to the Illinois Institute for Juvenile Research between the years 1923-27 were subjected to statistical study. This first volume contained a study of incidence, genetic, and intellectual factors in children's behavior problems. The second volume utilizes only a part of the cases used in 1931, being limited to white children between the ages of six and 18 years, with I. Q.'s of 50 or above.

In this second volume three criteria of seriousness or ominousness were set up, with which 162 frequently noted behavior traits were correlated. As in the first study, behavior traits were divided into those closely connected with the personality and those closely connected with conduct. Accordingly, the first criterion is called *personality-total* and the second *conduct-total*,

with each criterion made up of all traits in that classification reported for a given case. A third criterion was used which was called *arrest by police*. These are the criteria with which the 162 traits are correlated. Correlation coefficients were also computed for the interrelationships of traits among themselves. Practically all of the material in the book is given in table form (122 tables) and the arrangement of the coefficients is such that they can be easily interpreted. Pearsonian correlation is used throughout the work, and this is only understandable to those fully conversant with statistical methods.

The value of this statistical procedure, as explained by the author, is to discover unknown relationships in collected data. The method is purely exploratory and does not proceed from a hypothesis. There are, therefore, no conclusions or interpretations, and nothing is proved or disproved. The author points out that the relationships which are disclosed statistically can later be investigated by other scientific methods. He also points out many factors entering into the selection of data which could materially distort the statistical correlation coefficients. These observations of the author indicate that the method would be highly unreliable in the hands of untrained workers and that there are many hidden and often unsuspected sources of error in using it.

In looking over the tables, the clinician will find many relationships he has already observed, but there will be others of which he is not aware. For instance, sex delinquency (coitus) in girls was found to be correlated with staying out at night. This would appear to be underscoring the obvious. However, when it is found that swearing in girls correlated highly with conduct disorders, a relationship is discovered that might not be so obvious to the clinician, and the trait of swearing assumes a new aspect. These coefficients, even when obvious, confirm statistically the more general observations and impressions of the clinician.

It goes without saying that any study based on complete psychiatric, psychological, and social study of 5,000 juvenile cases will be of value. Like the first volume, the present work should be of great interest to those engaged in studying patterns of behavior.

A critical evaluation of the book would of necessity entail an evaluation of correlational procedures in general. Whether these procedures will contribute greatly to the study of human behavior or whether they can aid the clinician in a practical way remains for the future to decide. In any case, the present work is a good example of the statistical method and certainly deserves careful study.

Castor Oil and Quinine. By GEORGE WONSON VANDEGRIFT, M. D. 252 pages. Cloth. E. P. Dutton & Co., Inc. New York. 1942. Price \$3.00.

Biography and autobiography are often the most attractive forms in which history can be recorded. Both have been abundantly utilized. This book records the personality and experiences—as seen by his son—of a remarkable physician who lived in that period of the nineteenth century when modern medicine was laying aside its swaddling clothes and learning to move ahead.

Dr. Vandegrift, having completed the sketchy curriculum offered by the New York University in 1879, hung out his shingle in the lower east side of New York City. The neighborhood was that of Corlears Hook. The immediate vicinity comprised Madison, Grand and Henry Streets and East Broadway, a neighborhood which had been settled originally by Dutch, German and British immigrants. That part of the city at the time presented a very different appearance from what one would find today. It was, in part at least, a fashionable district. There were private homes of brick, two and three stories in height, intermingled with wooden houses with grass plots and gardens. Henry Street and East Broadway were sedate and quiet, paved with cobblestones and shaded by elm trees. At night, the flickering gas lights at the street intersections were considered sufficient illumination for the traffic which went on after dark. Here resided many of the wealthy and prominent families who, a few years later, moved far uptown to Madison Square and Fifth Avenue.

Because Dr. Vandegrift's dwelling and office were located in a house on the corner of Henry and Gouverneur Streets, he was commonly known in the neighborhood as the "Corner Doctor." Some of the author's earliest recollections were of crowds of men, women and children entering and leaving the house at all hours of the day and evening. The waiting rooms were usually overflowing. Men stood in groups on the sidewalk, all waiting their turn to see the doctor. The neighborhood druggist compounded daily more than 100 prescriptions written by the Corner Doctor.

In those days, typhus fever and malaria were nearly always present along the waterfront. Typhoid fever and the infectious diseases of childhood were so common that little attention was paid to them. The diagnosis of diphtheria was made, not with a microscope, but by the appearance of the membrane in the throat. With his pocket knife and hairpins from his pocket, the doctor performed tracheotomy almost daily. There were no laboratories available but each physician had his own small collection of reagents and test tubes by which he was able to determine the presence of sugar and albumen.

IN THE PSYCHIATRIC QUARTERLY SUPPLEMENT for January, 1942, appeared a review of the Flexners' life of Dr. William H. Welch.* This biography of Dr. Vandegrift supplements and objectifies the theme of Dr. Welch's life story. Dr. Welch was the teacher and scholar, the cloistered scientist, working alone in his laboratory, ferreting out the secrets of disease and contagion. Dr. Vandegrift, by contrast, living as he did in the same period, saw the practical and everyday side of the practice of medicine. His work was at the bedside. It was he who, when occasion demanded it, would go out and bring to the sickroom on the fifth floor of a tenement house a scuttle of coal and a pitcher of milk to make sure that the patient did not suffer from cold and hunger until other help could be secured.

Dr. Vandegrift was an interesting character, resolute and strong-minded and dominated his patients and families with dictatorial authority and success. To them he was more than a family doctor, he was also their guide, philosopher and friend.

This book is a contribution to medical science that is worth while. Men of the type of Dr. Vandegrift are rarely seen today, and it was well for posterity that he left behind a gifted son who had the industry and literary gift to make this record for medical historians of the future.

Fields of Psychology. An Experimental Approach. Edited by Robert H. Seashore. 643 pages. Cloth. Henry Holt and Company. New York. 1942. Price \$3.25.

Psychology has shown extraordinary scientific progress during recent years, a fact amply confirmed by the present volume. The editor has requested representatives of various psychological fields, all of whom are well known and of recognized standing in psychology, to present some experimental work in their fields.

The book is not an introductory textbook in psychology, or a laboratory manual, nor does it give a review of all the experimental work in the respective fields. As the editor points out, the volume contains only a sampling of experimental work in each field and is to be used as a supplementary text in psychology courses. For this reason, the book is somewhat limited in scope.

Ten fields have been selected, and the editor has appended a chapter on systematic psychology in which he points out convergent trends in psychological theory. Following, is a brief outline of the experimental work in the 10 fields.

*William Henry Welch and the Heroic Age of American Medicine. By Simon Flexner and James Thomas Flexner. 539 pages. Cloth. The Viking Press. New York. 1941. Price \$3.75.

1. General Experimental Psychology. Four experiments are discussed: autokinetic phenomenon, sensitivity of hearing, the startle pattern, and mechanical ability. The autokinetic phenomenon is used to illustrate the "frame of reference" in psychological experiments. The experimenter, unfortunately, failed to consider individual differences and persisted in the dubious practice so often found in experimental psychology of treating all subjects as though they were identical in nature. The individual variations were not interpreted and important perceptual mechanisms involved in such reactions as autokinetic phenomenon, reversible perspective, illusions, etc., were not mentioned. These mechanisms are of importance in clinical psychology and psychiatry, since large clinical groups react differently and can thus be differentiated.

2. Physiological Psychology. Several experiments with action currents are outlined. A study of auditory functioning including action potentials, "stimulation deafness," and localization of pitch on the basilar membrane are given. Cortical functions and electroencephalography receive attention. This work represents close coordination of the efforts of neurologists, neurosurgeons, psychiatrists, and psychologists.

3. Comparative Psychology. Animal experiments of various kinds are described. The inheritance of psychological characteristics was demonstrated by studying race differences in training and maze learning in rats. The social behavior of primates received experimental study. This chapter demonstrates that animal experimentation is beginning to have the same relationship to psychology that it does to medicine.

4. Human Development. The author of this section discusses the experiments that are purported to show that the I. Q. is not constant and changes in accordance with environmental conditions. Thus, children of feeble-minded parents, when placed and trained in homes on a higher social and intellectual level, have I. Q.'s corresponding to the higher level rather than to the lower. The effect of training on children and the question of changes in adult intelligence are also discussed. The author's contentions and the Iowa studies of which they are a part have aroused considerable controversy which probably will exert a very beneficial influence on those who have placed too much reliance on psychometric results. Their importance for the nature-nurture problem, however, remains uncertain.

5. Educational Psychology. A discussion of Thurstone's "primary abilities" is given, and an outline of the reading problem is made. The discussion of the reading problem is rather inadequate in the light of the large amount of experimental work done in this field and in the failure to mention such factors as binocular fusion, refractive errors, strephosymbolia,

eye dominance, and other very important points that should be considered in the teaching of reading. Some experiments with the old problem of the transfer of training are described. It was concluded from the various experiments that transfer is dependent on the type of teaching used, a conclusion which has obvious implications for education.

6. Vocational Guidance. Various tests of occupational ability, vocational interests, and tests for predicting success in college are discussed.

7. Industrial Psychology. Selection of personnel, employee training, and consumer surveys receive attention.

8. Avocational Psychology. Experiments in artistic singing, mood of musical phrases, and art are outlined. The use of phonophotograms in the analysis of the voice has opened new avenues of research in art. The chapter concludes with a report of experiments in physical education and recreation.

9. Social Psychology. Experiments of group effects are reported. The Orson Welles' broadcast, of course, receives attention under this heading. Social attitudes and stereotypes are examined experimentally.

10. Abnormal and Clinical Psychology. A review of personality inventories and the conflicting results obtained from them is given. The author discusses improvements of some of the existing inventories, but the general impression of the entire discussion is that they are not very reliable tools in clinical psychology. They do represent, however, the psychologist's attempt to standardize and objectify interview-methods and when combined with other procedures are useful. Of more interest, is the study of experimentally-produced abnormalities of behavior in animals. The rat experiments are reported in which Maier experimentally induced behavior closely resembling human psychotic and neurotic behavior. Liddell's experiments in producing neurotic actions in sheep and pigs and Lush's experiments with nervous goats are given. The chapter is concluded with an interesting and probably a generally-accepted criticism at the present time of the recent Duke University experiments in mental telepathy and clairvoyance.

While the book offers an excellent sampling of experimental methods used in widely differing fields of psychology, it cannot be used as a source of complete information about these fields. The primary purpose of the book as a supplementary text must be kept in mind, and as such it appears to be well adapted to serve its purpose. The book can also be recommended to those interested in knowing how such varied fields as animal behavior, art, industrial problems, and extrasensory perception can be made the objects of scientific psychological experimentation, and it can also be recommended to those interested in answering the question of what psychology is.

Medical Parasitology. By JAMES T. CULBERTSON. 269 pages. Cloth. Columbia University Press. New York. 1942. Price \$4.25.

The author is assistant professor of bacteriology at the College of Physicians and Surgeons, Columbia University, and has contributed much to the knowledge of parasitology. Besides this volume he has recently published one on immunity against animal parasites. The present volume is offered as a practical work for medical students and practitioners rather than as a research aid.

Disorders caused by animal parasites are prevalent throughout the world although we generally think of them as tropical diseases. The recognition of these diseases assumes new importance in view of the rapidity of air transportation in which infected insects may be carried and thus distribute disease in new areas. Besides, travelers from the tropics may not manifest disease until they have resided in the temperate zone. This is of grave importance considering the large personnel of our armed forces, many of whom have already been exposed to tropical diseases. For these reasons, a volume of this type is particularly welcome at this time.

The material is discussed in two parts. Part one deals with general considerations under the headings, infection, epidemiology, natural resistance and acquired immunity, diagnosis, specific therapy and prophylaxis.

The second portion of the book is given to detailed and specific discussion of the various types of parasites including morphology, diagnosis, prophylaxis and treatment. It gives, as well, details of cultivation when this is possible. The descriptions are brief, clear and well presented. The amoebiasis, leishmaniasis, malarial, coccidiosis, trematode and acanthocephalan infections as well as other parasites are discussed under the general heading of "Infections caused by Animal Parasites."

The appendix includes an excellent chapter on the technical methods for the preservation and examination of parasitological materials, in which the various methods are given in detail. A list of reference books and a detailed index complete the monograph. Twenty pages of photographic plates are distributed through the volume, these are multiple on each page and present not only excellent likenesses of the various parasites but striking reproductions of the afflicted human hosts. A number of instructive figures and tables are also included.

The volume is heartily recommended as a practical résumé of significant information upon animal parasites of medical importance as it was intended to be by the author, and also as a timely publication for those interested in the subject.

The Educational Philosophy of National Socialism. By GEORGE FREDERICK KNELLER. 299 pages. The Yale University Press. New Haven. 1941. Oxford University Press. London. 1941. Second printing, 1942. Price \$3.50.

To the reader who cares to have a genuine inside view of the Nazi intellectual structure, this book is made to order. As one who has read much material on the philosophical basis of German action, this reviewer unhesitatingly recommends this volume as the most thorough analysis of that strange phenomenon, the philosophy known as National Socialism. The author brings as much order into the arrangement of discordant materials as is possible. The organization of this material is a superb job.

How well it is made clear that the Nazi philosophy is a "new ideology." "Nationalism" does not mean the usual concept of nationalism, nor does "socialism" mean what we usually think it to mean. "National" means "racial" (German *Volk* everywhere); and "socialism" refers to the organization of this German *Volk* (people or kin). And by organization is intended a complete, absolute organization and absorption of all German kin into one great whole. The idea of National Socialism is premised on a peculiarly German theory or arrangement of a scale of values which are declared to be indigenous to Germans as Germans, and not inherent in other peoples of different kin or race.

Now while many of the utterances of various spokesmen strike the outsider as the most arbitrary drivel, the German espousal of such ideas has been serious enough. Well does the author entitle one of his chapters, "The Virus of National Socialism."

The author has brought out a very important consideration. He tells us that despite all the propaganda which was put out very early by Hitler and his crowd that the Republic had failed, the truth is that it had not failed. The assertion of failure was merely the attempted justification for the grabbing of power. The Republic was well on its way to a complete solution of the reparations problem, the Reich budget was balanced, and there was increasing improvement of political centralization.

Coming back to the main idea of National Socialism, namely the racial basis, it is made clear that the German state is the vehicle through which "destiny" resident in German blood will be realized in the world. And the state, in theory at least, must be dominant over all life and institutions in order to bring this destiny to pass. This destiny is a kind of political fatalism, a predetermination of the German gods—blood, soil, folk and homeland. The individual must swim along with fate or destiny or be drowned, forcibly

drowned if necessary. There must be no more "deciding for oneself." "The individual is free provided he wills as the *Volkstaat* wills." The deep fallacy lurking in this statement is the unwarranted assumption that whatever the state wills is necessarily what the individual also wills. But the great tragedy is that National Socialism intends to see to it that all individuals conform their wills to the will of the state. This is not a joint enterprise of discovery and evaluation in a spirit of free inquiry. The state already knows, has already "discovered," through the revelation of National Socialism, what the will of the people (*Volk*) or race really is.

The dreadful result of the National Socialist philosophy lies therefore in what it has done and is doing to the minds of German youth through its educational program. Education is, of course, simply a technique of propagating and conditioning youth in the National Socialist philosophy. Youth is the raw material to be molded to the Nazi form. As one writer put it, "Our national renaissance is dependent upon an organic discipline of our youth." And another, "Youth has no rights; it has only a duty." That being the educational ideal, the youth, like sheep, are gathered and then run through the form-shaping disciplines of organization in clubs and schools to come out at the other end as "Hitler youth," indoctrinated young soldiers of the state. The details of this entire program are splendidly documented in this book.

The account of what has happened to German education is a sad story. The universities are not universities in the usual sense at all. Terms such as, "objectivity," "freedom of research" and "impartiality in learning" are reinterpreted. The sense in which we commonly use these words as applicable to university endeavor, is deliberately repudiated. Scientific endeavor, so it is declared, can proceed without impartiality and objectivity in the common usage of these terms. Science, as well as persons, and as well as all other institutions, must somehow be made the instrument of the state's destiny. Science must somehow confirm the legitimacy of National Socialist philosophy. Thus the perversion of the educational process at the university level completes the blackout of learning. No community of outlook in a worldwide fellowship of scholars is possible. Universality of knowledge is wiped out, and the German mind is isolated from the wider world of thought.

This volume gives the reader a clear view of an amazing spectacle—a great people self-hypnotized, propelled by its ideology into a mass delusion, going forward on a program which unfits that people for a partnership in world community.

Sabotage, the Secret War Against America. By MICHAEL SAYERS and ALBERT E. KAHN. 266 pages. Cloth. Harper and Brothers. 1942. Price \$2.50.

The authors are well qualified to write upon this subject, as Washington newspaper men who have had access to many documents and much information which is not generally known. The book is, to a large extent, made up of material which has appeared from time to time in newspaper articles since the rise of the Nazi party in Germany, specifically since 1933. The information, fully documented with names, dates and origins, classified and brought together as has been done, presents a picture of subversive alien propaganda that without such careful presentation would be unbelievable.

The movement was thoroughly organized, with task groups and leaders, who were in turn directed and organized by Ernst Wilhelm Bohle, a native of Bradford, England, of German parents and educated in South Africa and Germany. He became the head of the *Auslands—Organization*. Operating from his headquarters in Berlin, he applied himself energetically to the task of Nazifying all persons of German descent who lived outside of Germany. His purpose, which he accomplished with surprising success, was to stir up violence and discord and to foment old jealousies and hatreds among the natives of countries throughout Europe, in South America and in the United States. With apparently unlimited funds at his disposal, he appointed agents and representatives to infiltrate American labor and other organizations, societies and clubs, as well as the CCC camps. Bohle and Rudolph Hess organized the antagonism to the Roosevelt administration and spread the propaganda that the United States had fallen into the hands of Jews and Communists. This activity was in the United States, entrusted to an organization known as the German-American Bund, of which Fritz Kuhn was the leader. The Bund did not make satisfactory progress. The American people were not interested or were suspicious and it soon lost prestige. When Fritz Kuhn was arrested and the unsavory details of his career became public, the organization was angrily referred to by Bohle as the "blunderbund."

Under the pretense that these subversive organizations were struggling to save America from Communism, the boldest activities of a pro-Nazi character went on. Even the offices of senators and representatives at Washington were permeated by these spies. Interesting accounts are given of the activities of Father Charles E. Coughlin and other anti-war agitators. The name of Charles Lindbergh was suggested by Herman Schwarzmann, the head of the Astoria, Long Island, unit of the Bund, as a man who would prove to be a popular leader and could be won over. The success of Schwarz-

mann's plan was amply demonstrated in Philadelphia Arena auditorium on May 29, 1941, hardly more than six months before Pearl Harbor. At this remarkable meeting, seats on the platform were occupied by Senator David I. Walsh, Mrs. Burton Wheeler, Mrs. Champ Clark, Kathleen Norris and others. The packed auditorium was filled with Christian Fronters, Bund leaders and official representatives of the German Reich. When Lindbergh arose to speak, the audience gave him an enthusiastic greeting. His virulent attacks upon the President of the United States and the Administration were greeted not only with applause but with rousing cheers, interspersed with shrill cries of "Impeach Roosevelt!" "What are we waiting for?" Some members of the audience arose and gave the Nazi salute. The Philadelphia News the following morning commented that most amazing of all was the bland smile that spread over the face of United States Senator David I. Walsh of Massachusetts when these cries and the booing of President Roosevelt were going on. Said the paper: "Instead of protesting, instead of resenting the disgraceful exhibition, Senator Walsh sat in his chair, beaming on the half-frenzied crowd."

A number of interesting accounts are given of the activities of spies and paid agents of the Third Reich who had free access to the Capitol and to executive offices in Washington where they made themselves at home. They obtained franked envelopes by the tens of thousands from certain senators and members of Congress to send subversive material throughout the country. One of these agents was Laura Ingalls whose activities were often referred to by the newspapers. Among other eccentricities, she had been one of the early women aviators. She flew over the Capitol and dropped paper bombs on the White House, demanding that America keep out of the war. Her services as a secret agent of the Reich were secured cheaply. She only received \$300 a month. Ralph Townsend, Father Coughlin, G. Allison Phelps, and others whose activities may have benefited Germany or Japan but who posed as patriotic Americans, Robert E. Wood, chairman of the Board of Sears, Roebuck and Company, and many others are referred to at some length. The F. B. I., however, was not idle. Hundreds of spies, many of whom were disloyal Americans, have been rounded up and are serving prison sentences; and six have been executed. For all that, up to the time of the publication of the book in midsummer, 1942, activities calculated to impair the morale of the army and navy were still noted: It was observed by critics that newspapers like the Chicago Tribune and some of the Hearst publications and some others "come as close to treason as they dare."

Sayers and Kahn have rendered a patriotic service in presenting this material, much of which had already been printed in the newspapers; but, ap-

pearing as it did in piecemeal over a long period of time and lacking coherency and continuity, it did not give to newspaper readers the full significance of all that was going on. The authors secured letters and official documents which are reproduced and together form a striking exhibit.

Our Sex Life. By FRITZ KAHN, M. D. 2nd ed. rev. 459 pages. Cloth. Trans. from the German by George Rosen. Alfred A. Knopf. New York. 1942. Price \$5.75.

This volume endeavors to cover the whole realm of sex. It deals with male and female anatomy and provides charts, diagrams and pictures. Sex functions are dealt with in great detail. Techniques of sexual relations are ably discussed and much more fully than in many other volumes. Psychological factors of sex disturbances are well handled. There is a detailed account of the diseases of sex life and a long section on prostitution. If one wants all this in one volume, then this is a very good book to have on hand.

The reviewer wishes to comment particularly on Part Nine: "The Sex Life of Unmarried People." On the whole it is rather remarkably good, but we have some question of consistency regarding the subject of masturbation. The author opens the subject very ably, and his attack on Tissot and others who are in large measure accountable for the belief in the dreaded consequences of masturbation is commendable. He goes on to say, "Masturbation as such is not harmful to health." "No case is known where someone suffered physical or mental harm because of a moderate practice of masturbation . . . Masturbation is subject to the same rules as sexual intercourse in general." Further, the author assumes that almost everybody practices masturbation under some circumstances, and he states that some people seem to require it. He wants those who require it to be free from disquiet concerning it. Yet he is so afraid of recommending it, that he proceeds to qualify what has been said in such a way that any of those who did practice it might readily develop a sense of guilt about it. For example, the author makes the very questionable statement that a prolonged habit of masturbation in women is one of the most frequent causes of frigidity. (p. 410). That, in the reviewer's judgment, is a very harmful thing to say. Again, the author says that masturbation is almost always followed by depression. "This depression is nature's protest against an unnatural form of sexual behavior." One would not expect the conflicting statements on this subject to be of great help to anyone involved even tentatively in the practice.

Aside from the foregoing criticism, this volume has so much to commend it that the reviewer was reluctant to pass any adverse comment at all.

Sex Fulfillment in Marriage. By ERNEST R. GROVES, GLADYS HOAGLAND GROVES and CATHERINE GROVES. 319 pages, with index, bibliography and five illustrations. Emerson Books, Inc. New York. 1942. Price \$3.00.

Prof. Groves is the author of a number of works for general readers on mental hygiene, marriage relations and other psychological and sociological problems. In the present volume, he has had the collaboration of his wife and daughter, both experienced writers and both competent students of marriage and the family.

They have undertaken to outline in a fashion which any intelligent adult should understand the rôle which sex does and should play in the marriage relation and in the development of well-integrated personality. They recognize plainly that sex involves far more than mere coitus; but there has been no disposition to neglect the simple problem of mechanics. In this respect, there are five excellent diagrams of Dr. Robert L. Dickinson's well-known illustrations to serve as a foundation. As psychiatrists know, young women can still be found who retain infantile, anal birth theories and have little knowledge of the structure or functions of their own genital organs. This volume gives, in simple language, much of the information to suit their needs. It is well adapted, too, to the needs of that growing, sophisticated group of modern girls who, as the Groves put it, "go to physical sex for relief." Perhaps the authors generalize too much here; but there is certainly warrant for their conclusion, in many cases at least, that such women "soon either develop affection for the man with whom they are intimate, or the disillusionment of sex without affection makes them feel more strongly than ever the loss (of affection) from which they suffer."

"Sex Fulfillment in Marriage" is written around the sound thesis that intense affection is part of the fully satisfying, adult sex experience. The Groves' definition of sex is that of dynamic psychology. The psychic aspects are emphasized; and if the case histories may be regarded as somewhat oversimplified, they at least illustrate the workings of the unconscious in ways which the average reader will be well able to comprehend. A person brought up on the sentimental blah which passed for literary enlightenment on the subject of sex a generation ago has difficulty in expressing sufficient appreciation for a work as direct, clear and relatively unemotional as this one. It is a pleasure to record the absence of such words as "purity" and "holiness" and the presence of such matter-of-fact advice as that to have coitus with the light on.

Besides the general discussion of psychic and physical sex adjustment, this book contains a brief but adequate discussion of birth control and chapters on the elementary facts of sex hygiene, pregnancy and childbirth.

Pain. By THOMAS LEWIS, M. D., F. R. S. XIII and 192 pages. Cloth. The Macmillan Company. New York. 1942. Price \$3.00.

The author, Sir Thomas Lewis, is in charge of the Department of Clinical Research at the University College Hospital in London. He has presented here concisely and systematically a great wealth of scientific material dealing with modern concepts of the nature and mechanism of pain. Many of the reported facts are the result of the author's personal observations in his own laboratory, and some of the conclusions drawn are admittedly not universally accepted. Where subjective views are presented that differ from those held by other authorities, the differing views are outlined alongside the author's own ones and critical comparisons are attempted. Instead of offering a definition of "pain," the author wisely acknowledges that "Reflection tells me that I am so far from being able satisfactorily to define pain, of which I here write, that the attempt could serve no useful purpose."

Primarily, the book considers the theoretical, neurophysiological, and neuropathological aspects of the pain problem rather than the practical clinical side. However, here and there practical applications are made, and some clinically important forms of pain are discussed. Some of the problems studied include the distinction between immediate and delayed pain response, the comparison between superficial and deep pain, the correlation between pain and temperature, and between pain, tenderness, and rigidity in visceral disease, and the nature of referred pain. One chapter deals with the "erythralgic state" and another with "nocifensor tenderness;" both of these terms were coined by the author himself to designate certain typical organismal responses in connection with the mechanism of pain. The final chapter entitled "Principles in the Clinical Use of Pain" formulates necessary criteria for an adequate description of pain, e. g., the severity, quality, localization, duration, time intensity, and the circumstances in which pain develops.

The author has failed to mention in this otherwise comprehensive volume the non-organic or psychogenic varieties of pain which are so common in psychoneurotic disorders. The psychiatric reviewer notices this omission with regret.—The caption "Fig. 22" on page 130 should read "Fig. 23." Otherwise, there is no adversely critical comment.

The book is thoroughly scientific and well written. It contains 26 illustrations (diagrams and curve records of experiments). To it is appended an extensive bibliographical reference list. While the book is only of remote interest to the psychiatrist, it is highly recommended to the reader interested in basic physiological and neurological principles.

Psychologic Care During Infancy and Childhood. By RUTH MORRIS BAKWIN, M. D., and HARRY BAKWIN, M. D. 317 pages. Cloth. D. Appleton-Century Company, Inc. New York. 1942. Price \$3.50.

This volume represents a departure from the usual texts on child guidance, child psychology, and child psychiatry. It represents, perhaps, a step forward in the presentation of this subject, due to the inclusion of a large and almost exhaustive range of psychologic problems in a comparatively small volume. This has been done by eliminating numerous features usually found in similar texts, such as discussions of points of view, controversial arguments, lengthy descriptions of conditions, and illustrative case studies, which make many texts cumbersome and in some cases actually confusing. The authors in this book have made their descriptions so clear and so concise that illustrative cases are unnecessary. There is an absence of academic bias and the work impresses one with its simplicity, common sense, and freedom from personal opinion.

The authors state that this work "is primarily designed to interest and instruct the physician in the promotion of optimal psychologic health in the child." It is also designed to aid nurses and social workers. The simplicity of language and nontechnical presentation would, however, permit this book to be used by any group dealing with children, and it could be used quite well by parents.

The arrangement of the book follows major problem classes; and space will not permit the listing of the large number of problems included under the separate headings. In any case, the list seems to be rather complete. Among the main headings, are two chapters devoted to the emotions under which are found self-dependence, aggression, negativism, anger, cruelty, insecurity, sex, love, and modesty. Fear is also included, and the various abnormal manifestations of fear are given. Various problems of intelligence, handedness, speech, reading disabilities, and other disabilities are discussed. These chapters will be of special value to physicians. Following these are problems connected with the training of children, such as those of books, parties, motion pictures, radio, and hobbies. The training in habits of eating, sleeping, rectal and vesical control, sex education, and money are listed and discussed. Discipline, parental attitudes, siblings, and school activities through high school come next. The various problems of adolescence receive careful analysis. Habits such as thumb-sucking, nail-biting, and the like are included in one chapter. Difficulties in defecation, enuresis, disturbances of sleep, sexual disturbances, antisocial behavior and disturbances associated with the physical status make up several other chapters. The discussion of the troublesome problem of enuresis is especially good; and workers in institutions, orphanages, and similar places will profit

from its clear presentation. In conclusion, care during infancy is described, and an excellent study of hospital care is given. The psychologic aspects of the separation of mother and child in modern maternity wards should be of great interest to medical men and psychologists.

The problems are usually presented with a brief description of symptoms, age, incidence, and sex differences. Following this come discussions of etiology, diagnostic procedures, and finally points of treatment. Some topics receive a little more space than others, but the general form is one of brevity. At the end of each chapter, a short bibliography having direct bearing on the problems of that chapter, is given; and a short general bibliography is included at the end of the book. The illustrations are excellent and well chosen.

There is little discussion of a specific point of view, other than to stress innate patterns of development and maturation. Freudian psychology is absent, and Freud's name is not even mentioned. The emphasis appears to be one of simple description of conditions in the traditional medical-textbook fashion. Sexual development, which is the favorite topic in many recent works on child guidance, is handled matter-of-factly in this work; and no undue emphasis or prominence is given it, a very welcome relief from some of the more extreme expositions of the problem.

In general, this book should be valuable to all those dealing with children. It gives quick information on a wide range of childhood problems and affords a perspective of the field that is often lacking in similar books. This perspective arises from the authors' obvious familiarity with clinical work. Some readers may find the discussions too brief. However, to have expanded them in relation to such a large number of problems would have made a book of too great size, and the main purpose of the work would have been lost. The book can be recommended to all those who desire an accurate and well-rounded presentation of the numerous psychologic problems of childhood in a compact and readily usable form.

Intelligence in Mental Disorder. By ANNE ROE and DAVID SHAKOW.
129 pages. Paper. Annals of the New York Academy of Sciences.
New York. 1942. Price \$1.25.

The clinical psychiatrist, with little knowledge of the technicalities of psychometrics (and with less interest in them), will probably find most of this monograph a bore. But this does not alter the fact that Roe and Shakow have produced an able and scholarly contribution to the subject of intelligence in mental disorder. The authors are aware of the many difficulties attendant on research into this subject and they very creditably attempt to wrestle with these problems rather than ignore them, as is often

done. Of course, the inherent inadequacy of the Stanford-Binet examination cannot be helped. As long as no significantly better test is available, the quality of all research employing this test will be impaired. But we should not forget, through the custom of suppressing platitudes, that a universally satisfactory method of measuring intelligence has not yet been devised, nor, for that matter, do we have a satisfactory definition of "intelligence."

The material for this study consists of the results of Stanford-Binet tests given to 827 patients at the Worcester (Mass.) State Hospital. This material is analyzed thoroughly, and comparisons are made between diagnostic groups and normals. Further accuracy is obtained by dividing the subjects in each diagnostic category into a "representative" group and a "non-representative" group. An unhospitalized normal group is used for control; and the group "without psychosis" is studied with the psychotic groups. All the data are tabulated in the approved psychometric and statistical manner, and technical graphs and summaries amply illustrate the text. (There are 35 tables and nine graphs.)

In general, many well-known clinical findings are confirmed psychometrically. One psychologist's "conclusion that an initial low level conduces to neuroticism," and another's "belief that feeble-mindedness is an etiological factor in manic-depressive" psychosis, tend to be disproved. The authors conclude that "in the presence of any psychotic or psychopathic process certain changes may occur" which are in the direction of a "lowering of the level of functioning and are both general and specific in nature." The type of items most affected are of "the conceptual thinking and immediate memory groups and those least affected are old learning groups." This lowering of functional level is not considered as "deterioration" and interestingly enough it appears to be more severe in hebephrenia than in general paresis.

Paranoids, catatonics and simple schizophrenics tend to approach the normal, and the psychometric picture of the manic-depressive is indistinguishable from the catatonic. The group "without psychosis" falls distinctly below the normal, indicating that the former group should not be substituted for normal controls. The psychoneurotic group tends to be higher on some individual items; and the psychopathic personalities are slightly lower; but both tend to approach the normals.

The results in feeble-mindedness were as would be expected. And in the alcoholic group the authors feel that the "psychosis rather than alcoholism . . . is the factor affecting test performance, and further that it is not alcoholism *per se* which induces the psychosis . . ."

The danger of drawing unwarranted conclusions is nowhere better illustrated than in the similarity of the psychometric picture in general paresis and hebephrenia, and the authors rightly caution that functional loss (lack of attention, etc.) may appear on the Stanford-Binet test as no different from actual organic deterioration.

A large amount of physical and mental labor have gone into the making of this small monograph (the proofreading of the tables alone represents an enormous task), and Roe and Shakow are to be congratulated on their thoroughness. This book is recommended even to those clinical psychiatrists who shun psychometric technicalities. The tables, graphs, and formulae may be accepted at their face value, on the reputation of the authors; the text will prove valuable to all psychiatrists.

Psychiatry in Medical Education. By FRANKLIN G. EBAUGH, M. D. and CHARLES A. RYMER, M. D. 619 pages. Cloth. Commonwealth Fund. New York. 1942. Price \$3.50.

Dr. Ebaugh is chairman of the American Psychiatric Association's committee on medical education and in that capacity has been prominent in the movement to provide postgraduate opportunities for state hospital medical staffs, a move which has proved so successful in a number of institutions situated somewhat remotely from medical centers. The mobile staff, consisting of 10 or 12 physicians connected with medical colleges or whose experience and training rendered them well qualified for giving instruction, conducted courses covering the whole subject of neurology and psychiatry at selected institutions from the Pacific coast to the Atlantic.

Professor Ebaugh's experience as a teacher is extensive, a fact which makes him familiar with the needs of the student. In one chapter, he comments upon the attitude of medical students toward psychiatry. He finds that in the beginning they are not attracted to this discipline. It is important to overcome this attitude on the part of the student; and the undertaking of this task will probably, in most cases, reveal not the superficial reasons advanced by the students themselves but the fact that they have deep-seated anxieties about their own mental and emotional problems. These usually prove not serious but should not be overlooked. In his classes at Johns Hopkins, Meyer met this by his students' personality study; and his successor, Whitehorn, is continuing the plan.

A subject which the book treats adequately concerns the need for psychiatric service in general medical and surgical hospitals. This service is planned to deal with borderline cases in which recovery is hastened and made more secure by attention to the patients' emotional conflicts.

This reviewer heartily agrees with the authors in their estimate of the practical and cultural value of premedical courses. He is old-fashioned enough to believe that cultural subjects should receive more attention and that a good deal of the physics that is now so strongly insisted upon, might, with benefit, be omitted; for the surgeon and internist, as well as the psychiatrist and obstetrician, quickly forget it with no regret. Those who specialize in physical therapy and refraction could be taught what they need while preparing themselves for such specialties. General cultural subjects are getting little attention, to the detriment of the embryo physician. The authors quote Shumway, who is a severe critic of the present setup and who points out that the student, in order to receive credit for eight hours of physics, must elect 10, plus two or more in trigonometry, not to mention requirements here and there of academic subjects such as physical training and military science. The discussion on this topic is well worthy of careful study.

The book everywhere gives evidence of the authors' understanding of the subject and their good taste in presenting it in such a readable form.

The Black Book of Poland. Compiled by the Polish Ministry of Information. xiv and 615 pages, with two maps, 185 photographs and reproductions of documents, detailed contents table and index. Cloth. G. P. Putnam's Sons. New York. 1942. Price \$3.00.

This book is a summary of the documentation collected by the Polish government in exile of the tortures to which the Nazis are subjecting conquered Poland. The general purpose of the Germans in that country requires little confirmation beyond news reports; the intent to exterminate the Jews and make a slave class of the Poles has long been obvious to the most casual reader of the press. The strategy of this terror, the planned, cold ferocity of its execution have not always been plain. In "The Black Book of Poland," that country's ministry of information—mindful of the tendency in the days after the first World War to label all Belgian atrocity stories as inventions or exaggerations—has collected and verified reports from a wide variety of sources on exactly what is going on in the Nazi-conquered territory.

Atrocities always accompany war. We, in the North at least, have always regarded our own Civil War as something of a gentlemanly conflict, yet it has its atrocities. When Sherman set out to "make Georgia howl," he aimed at the destruction of railroads, factories, grain and livestock; but stragglers and camp followers, out of hand, left a trail from Atlanta to the sea of arson, rape and murder. The German atrocities in World War I in Belgium were at least to a certain degree of a similar pattern. If they had

the sanction in some cases of junior officers and higher commanders, most were committed as reprisals—in the heat of action, in revenge for sniping, or in fear of civilian uprising. Until recently, even the extraordinary record of rape and murder of the army of Japan seemed to partake of this character, that is, it appeared to be largely by permission, rather than by order of the higher military authorities—even though tacit encouragement by them might well be suspected.

The black fate of Poland is a far different matter. There is no possible doubt that the unleashing of the evil which has overtaken that country was ordered from on high. There is no possible doubt that mass murder, pillage, the defiling of places of worship, the seizure of young girls for army brothels was coldly planned in advance and executed according to precise orders, even if with unleashed ferocity. The Nazis have reviled Freud; but only keen appreciation of dynamic psychology could have freed the dark forces of the unconscious for their work in Poland; men of conventional philosophy could hardly have conceived the present conduct of the German army to be possible. The capacity for unrestrained aggression—and for perversion—exists, of course, in all of us; but the modern world has not seen it in its nakedness before; to find a parallel in history, one might have to return to the days when Assyria burned, killed and enslaved in welding the Near East into an empire for the greater glory of “Ashur my good lord.”

“The Black Book of Poland” lists for page after page, names and numbers of Poles murdered during the first military occupation, the details of mass slaughters following, reports of the torturing of prisoners, the starvation or the deportation of large masses of the population, the rape of school-girls for army houses of prostitution, the reestablishment of Ghettos, the systematic murder of the Jews and the abuse of their women, the suppression of Polish universities and Polish culture, the establishment of special elementary schools to Nazify Polish children, the attempted destruction of the monuments and the worship of the Catholic church. These matters are documented, with many sources given. There are official German army orders, official reports of executions, German news stories of reprisals against Poles, reports by Polish and foreign fugitives from the occupied territory, news smuggled by underground means across the Polish border, sworn affidavits of witnesses to atrocities. The rape of Poland’s young women and the war against the church, for example, are recorded in the words of His Eminence, Cardinal Hlond, primate of Poland, in an official report to the Pope. Students of the psyche, as well as men of the law, know that witnesses to something seen with strong emotion are not entirely reliable. But no amount of discounting can greatly weaken this tale. If only a hundredth

of this report were true—and that less than a hundredth is untrue would seem to be a more reasonable estimate—the Nazis in Poland have committed the worst infamy in Europe's history.

For what human nature can do when aggression is fully unleashed, there can be no better source-book than "The Black Book of Poland." Some day it will be read in the light of a black and bloody sequel. For war in Poland is not over; secret newspapers are published; partisan bands are fighting; sabotage is committed daily; passive resistance is everywhere; and an exiled Polish army waits for the day to strike to come. When that day dawns, only the restraints imposed by an intellect which the Nazis have done their utmost to break will stand between the oppressors and their total destruction.

Effects of Alcohol on the Individual. A Critical Exposition of Present Knowledge. Volume One—Alcohol Addiction and Chronic Alcoholism. E. M. Jellinek, Sc.D., Editor. Preface by Karl M. Bowman, M. D. xxiii and 336 pages, with bibliographies and subject index. Cloth. Yale University Press. New Haven. Oxford University Press. London. 1942. Price \$4.00.

This is the first volume of three which will no doubt become a classic foundation work for future study, research and treatment in the field of alcoholism. This first volume is "devoted entirely to the etiology and treatment of abnormal drinking and to the mental and bodily disorders of chronic alcoholism." Volume II is to cover experimental material and deal with the problem of germ damage; and Volume III "will deal with the magnitude of the problem in terms of incidence and will analyze the statistics presented in the literature." The entire orientation is toward consideration of the problem as it affects the user of alcohol, with social aspects of the alcohol question excluded. Obviously, even with this limitation, the field the authors and editors have set for themselves is tremendous. The introductory description of the scope and method of the study indicates that it was necessary to select and consider—before preparation of their manuscript—from the 100,000 titles bearing on alcohol consumption, some 3,500 reports, after discarding those which have become obsolete, dealing with the "psychiatric, physiologic, biochemical, and pathological aspects of the acute and chronic effects of alcohol." It should be said that this material appears to have been selected and organized in outstanding fashion. The research was financed by the Carnegie Corporation for the Research Council on Problems of Alcohol and was carried out under direction of a supervising committee of which Dr. Jellinek is executive director and Dr. Bowman, medical director.

Drs. Bowman and Jellinek collaborated in writing Part I of the present volume, which covers the subjects of principal interest to the psychiatrist, "Alcohol Addiction and Its Treatment" and "Alcoholic Mental Disorders." Norman Jolliffe, M. D., is the author of a chapter on "Vitamin Deficiencies in Chronic Alcoholism" which opens Part II of the volume, is collaborator with Dr. Jellinek in the chapter on "Cirrhosis of the Liver," and with Herman Wortis, M. D., and Martin H. Stein, M. D., in the discussion of "Alcoholic Encephalopathies and Nutrition." A chapter by Giorgio Lolli, M. D., on "Marchiafava's Disease" completes the volume.

All the relevant literature is subjected to thorough review in the discussion of addiction and treatment, followed by a concise and carefully written recapitulation by the authors. There is much here, in the way of precise definition and clarification of terms which should be of great use to future writers on the subject. In the way of treatment, the authors note that the need for widely different methods was recognized long ago by Thomas Trotter but that criteria for determining what method is suited to the individual patient "are definitely superficial." They recommend that research be attempted over a period of years in "personality studies and life histories. . . of a type which will go far beyond those currently made" in an effort to establish such criteria. Of current therapies, they note among other things that drug treatments "even if successful in eliminating the symptom . . . leave the patient with the same basic difficulties that he had before;" that "substitutive treatments, mainly religious conversion, are being increasingly favored," and that causative treatments are theoretically the most desirable but that they encounter such great difficulties that "only compromise treatments are actually possible."

The discussion of the alcoholic psychoses is comprehensive and detailed. Of unusual interest, is the observation that there is evidence for the assumption that delirium tremens "occurs largely in psychologically normal drinkers." It is of interest, too, that Bowman's definition and description of chronic alcoholic deterioration are included without note of studies which cast some doubt on the occurrence of this condition.

Practitioners will find Dr. Jolliffe's discussion of vitamin deficiencies of unusual practical utility, with its emphasis on the necessity of maintaining a vitamin B₁ intake in a standard ratio to total caloric intake. When calories are added to the diet, a previously adequate vitamin intake may become inadequate. The author remarks, "that alcohol calories may increase the vitamin requirement is not generally known or well understood and is still neglected in estimating the adequacy of a diet."

This first volume augurs well for the completed research, suggesting that both general practitioner and psychiatrist may find it indispensable for

general understanding, research or treatment in the broad field of the alcoholic disorders. Dr. Jellinek's introductory remarks on scope and method of the study might serve in a wider field as a model discussion of the problems of scientific writing and the difficulties of weighing scientific reports and opinions. He remarks: "Under the sign of fair-and-square dealing it has become a habit to accredit all reports in the literature on an equal basis. Insecurity is artificially created by giving the appearance of indefiniteness to the results of a first-class investigation when a reviewer cites the failure of 'another investigator' to confirm these results, although the apparent disagreement may be due to the fact that the 'other investigator' has ignored experimental procedure, or shows no understanding of the problem or its meaning. Unfortunately, some kind of scientific Bushido seems to compel us to concede the respectability of everything which gets published in a scientific journal, instead of permanently ignoring certain of these contributions." Editors of scientific publications would certainly have reason to be grateful if contributors were to exercise greater discrimination in this sense.

Psychology and the Soldier. By NORMAN COPELAND. 136 pages. Buckram. The Military Service Publishing Company. Harrisburg, Penn. 1942. Price \$1.00.

This is an American edition of a useful little manual which was designed for British line officers and which American line officers and noncommissioned officers also should find valuable. Much of the source material and many of the illustrative anecdotes are drawn from American military sources in World War I and the Civil War; and the opening chapter is devoted to "American Military Psychology," with particular attention to the morale-building experiment undertaken at Camp Greenleaf in 1917, a project which did not at that time command the attention which it apparently deserved.

The junior officer or noncom of World War II will find much in this volume which is highly practical on such subjects as morale, discipline and leadership. The division of the book into two parts, the first concerned with psychology and morale and the second devoted to psychology and leadership, appears to give just recognition to the relative importance of the subjects. The chapters on the purpose of discipline and the psychology of discipline are particularly to be recommended, and there is a timely and important warning against the imposition of "collective punishment," always a temptation to an officer under stress, and always possible despite warnings and regulations.

This volume would be greatly improved by a publisher's introduction stating plainly that it is an American edition of a manual written for the British army. Although an appropriate footnote in the body of the book may call attention to differences between American and British services, the British authorship is nowhere specifically noted; and the unwarned American reader will be unpleasantly surprised to encounter the first references to the "King's Regulations" and the "working classes." The omission of such an introduction was doubtless due to haste in publication.

Both the psychiatrist and the experienced army officer will note that this volume has its faults. The author includes a sound warning against underestimating the enemy, then avers that the German is lacking in personal prowess in hand-to-hand combat and refers to his "lachrymose squeals for mercy when he faces retributive justice at the end of a bayonet." The chapter on "Women" is the weakest part of the book. Its chief emphasis is on the dangers of venereal disease and on the supposed benefits of "purity" to morale and to the physique; such important questions as homosexuality and masturbation are not touched upon. The conventional *mores* presumably make it impossible for a volume intended to have the wide popular use of this one to treat the subject of sex realistically. Professor Copeland's book is bound sturdily in olive drab buckram and is of convenient size to fit in field baggage. It would make an excellent gift for the newly-commissioned officer.

Doctors of the Mind. The Story of Psychiatry. By MARIE BENYON RAY. 335 pages with index. Cloth. Little, Brown and Company. Boston. 1942. Price \$3.00.

Marie Benyon Ray's profession is that of writer and editor. She writes clearly and vividly. She has a flair for the dramatic. Her scenes are visualized in swift, sure, broad strokes. Her characters are alive. They are original thinkers, gifted speakers, bold actors. Their careers are set in the midst of color and adventure. It may thus be seen that when Mrs. Ray sets out to tell "the story of psychiatry" for the literate lay public, her tale will be well out of the ordinary. Mesmer argues with himself in developing the fantastic theories by which he explains a real phenomenon. The affable Bernheim smoothly explains his views as he swiftly hypnotizes a distinguished visitor to the Nancy clinic. That "sensational old boy," Brown-Séquard, announces at the age of 72 that he has discovered the secret of rejuvenation: "Gentlemen, I may live forever!" Wagner-Jauregg, past middle age, and Sakel, "almost too young to be a psychiatrist at all," revolve in their minds the frightful chances they are taking before the former gives the first malaria treatment to a parietic and the latter gives the

first insulin shock to a schizophrenic. Bowman and Himwich chat informally over plans to investigate the rôle of anoxia in the shock treatment of schizophrenia. Franz Alexander explains in simple words the opportunity of psychoanalysis to further mental hygiene by making "Brief Analysis" available to thousands. A girl in insulin coma gives "a penetrating cry—the scream of the epileptic;" and Mrs. Ray is eye-witness to "a resurrection."

Such is "Doctors of the Mind." Concerning the sort of writing it is and the value of such writing, the psychiatrist who reads it will be entitled to his own opinion. But Mrs. Ray notes: "In the case of historical personages and events the personalities, scenes, even the dialogue are as close to the original as possible. With the living doctors, who appear under their own names, facts are closely adhered to; even their actual words are given whenever practicable, and their thoughts, as here set down, have been checked by them." C. Charles Burlingame, Manfred Sakel and Ira S. Wile read and corrected Mrs. Ray's completed manuscript; Franz Alexander and A. A. Brill are listed as having been consulted about the psychoanalytic chapters. Adolf Meyer, Abraham Myerson, Karl Bowman, Winfred Overholser and Nolan D. C. Lewis are others who gave interviews, extended research aid or rendered other assistance. Lothar Kalinowsky presumably sponsors the description of the inception and development of electric convulsive treatment. Mrs. Ray's description of "The Insulin Hour" was made possible by Superintendent Clarence H. Bellinger and Acting Director of Clinical Psychiatry Christopher F. Terrence of Brooklyn State Hospital; and Dr. George J. Train, then a senior assistant physician at Brooklyn, demonstrated the treatment to her on a visit to the insulin ward. With this imposing background, it would be rather difficult to maintain that the completed work lacks either technical or historical accuracy.

"Doctors of the Mind" is less a history of psychiatry than a series of brief historical sketches, followed by a review of current psychiatric knowledge and prospects. The subjects are judiciously chosen; the discussions are adequate. An attempt at thorough impartiality in writing about such subjects as psychoanalysis and shock treatment is evident, and a high degree of success in this endeavor must be conceded, although Mrs. Ray seems to have more admiration for Adler and Jung than is usual in psychiatric circles. The volume covers the latest developments; and the inquisitive reader may be rewarded by a comparison of the interview the author had with Dr. Harold E. Himwich and his coworkers on the subject of the nitrogen treatment of schizophrenia and the scientific report in this issue of THE PSYCHIATRIC QUARTERLY of those same workers on this same anoxia research. Mrs. Ray has done her best to set down adverse criticism of theories and methods,

but her basic material was derived from enthusiastic proponents of the theories and techniques she describes; and many a reader will close her book with greater optimism over the prognosis of mental disorder in general than most psychiatrists would think warranted. This is an inevitable result of her enthusiastic type of writing. Many psychiatrists, too, will deplore the author's use of "insane" and its derivatives for "psychotic;" the word was doubtless chosen with a popular audience in mind; but a minor effort toward popular education here would not have been amiss. The psychiatrist may close the book, too, with a feeling of bewilderment at the unrecognized excitement, the hypomanic spirit, which seems to pervade the profession; more research and less high adventure might seem to him to present a more nearly true picture. But the evidence for the book's scientific accuracy is impressive; and, if some might consider the treatment close to sensational, it must be admitted that this vivid writing will interest and inform many who never would finish reading—even if they began—a volume with a more sober outlook.

Action Against the Enemy's Mind. This Psychological War. Book One by JOSEPH BORNSTEIN, Book Two by PAUL R. MILTON. 295 pages. Cloth. The Bobbs-Merrill Company. Indianapolis and New York. 1942. Price \$2.50.

An Austrian newspaperman and an American editor, writing independently although in consultation with their publisher, have contributed this unusual volume for the better understanding of the nature and employment of one of our enemy's chief weapons, that of psychological war. Mr. Bornstein, refugee from the Nazi terror, who remarks that as late as 1941, "I knew nothing as yet about America," writes of German psychological warfare as he knew of it, treason in high places in Austria, armed fifth columns on the march in Norway, the Netherlands and Belgium, demoralization in France. And he maps from his experiences in the fall of Europe the strategy of Hitler's plans against us. There is little here that has not been known before; but the organization of his material is splendid; its presentation now is most timely; and there is important emphasis on the parts of this psychological program which he regards, after seeing the ruin of Europe, as the greatest threats to us. Of the process which destroyed one nation after another, he remarks, "Hitler's germs of corruption were ideas, and they were uncommonly simple: Hitler is the only one who can save the world from Bolshevism . . . Only capitalists and armament industrialists are warmongers . . . Only the Jews wish for war . . . There is order in Germany . . . if we had a man like Hitler . . ." For the success of the first idea, Mr. Bornstein cites a little-known incident: The final decision of

the Czechoslovakian Cabinet to yield rather than to resist despite desertion by Chamberlain and Daladier in the days of Munich is said to have been motivated by the arguments of two ministers, "Better conquered by Hitler than saved by Voroshilov." As to the applicability of this technique to America, Mr. Bornstein notes "a conviction of the National Socialist General Staff that a mighty Fascist movement will spread in the United States for the benefit of the Third Reich;" he notes that Hitler's aim of creating a revolution in this country never has been abandoned and that current Nazi propaganda is directed skillfully against the weak spots in our propaganda armor.

Mr. Milton's part of the book covers more familiar ground. It is a concise summary of what the Germans are doing to exploit known American weaknesses. It is perhaps significant that Mr. Bornstein, stranger to America, and Mr. Milton, native journalist, select independently what is fundamentally the same list of weak points against which the Nazis are aiming. Both writers include German exploitation of what remains of isolationism, German attempts to arouse anti-Semitism, to organize German-Americanism, to exploit suspicion of Communism. Mr. Milton adds the stirring up of capital-labor conflicts and the exploitation of racial and group differences other than anti-Semitism, with special reference to the negro problem, the problem of the American-born Japanese and that of the American-born Mexican, as well as that created by recent immigrants from Europe in our industrial states.

Mr. Bornstein and Mr. Milton are in substantial agreement that Hitler Germany has plenty of weak spots of its own and that we are not doing all we might to attack them. Considering Mr. Bornstein's conclusion that propaganda against Germany will be less effective than German propaganda against us until the time when Germany begins to face defeat in battle, this failure of our own propagandists to be effective up to date may be more apparent than real.

Psychology of Sex. A Manual for Students. By HAVELOCK ELLIS. 377 pages with author's preface, bibliographies, glossary and index. Cloth. Emerson Books, Inc. New York. 1938. Price \$3.00.

In 1933, Havelock Ellis completed a "simple and concise" little book, based on the research from which he wrote his seven-volume "Studies in the Psychology of Sex," for the benefit of "ordinary medical practitioners and students." Despite numerous popular publications since that time, it is, now in a new edition, still the standard introductory work—and probably the best available—on the subject.

The commanding stature of Havelock Ellis among the early scientific investigators of the phenomena of sex has only grown with time. When Ellis began his studies, scientific interest in sex "was usually held to indicate, if not a vicious taste, at all events an unwholesome tendency." Everyday terms of our psychiatric vocabularies did not exist; and Dr. Ellis himself coined the words to describe many of the conditions which he was among the first to investigate.

His well-known work hardly requires detailed description. There is concise but adequate coverage of such subjects as the biology of sex, sex deviation, homosexuality, marriage and "the art of love." There are appropriate and adequate bibliographies arranged by topic and chapter. The psychoanalysts are represented by a wide selection from Freud to Horney; authorities on sex who might well receive more attention from psychiatrists than is usually accorded include the gynecologist, Van de Velde, and Edward Carpenter, early writer on homosexuality; but the student might well dispense with Westermarck, whose conclusions on the subject of marriage have been pretty well refuted, and with Krafft-Ebing and Forel, whose views are today of little more than historic interest and whose writings are of current value for little more than their case histories. As for the orientation of Ellis' work, psychoanalysts naturally regret that his sympathy for, and understanding of, their discipline is accompanied by reservations. And many psychiatrists would take issue with his conclusions that except for occasional homosexuality in "presumably normal persons," sex inversion is a "congenital anomaly;" that masturbation often leads to *ejaculatio praecox* in men and frigidity in "many women;" that the psychic dangers of coitus interruptus are generally exaggerated; and that "neurasthenic impotence," due to a "more or less enfeebled" mechanism of "detumescence," is a condition commonly encountered. The compact, well-printed edition of Ellis' work under present review has been widely circulated. It deserves even wider attention, for it would be difficult to find a better introduction to this important subject for medical student, general practitioner or layman.

Victory Over Fear. By JOHN DOLLARD, Ph.D. 213 pages. Cloth. Reynal & Hitchcock, Inc. New York. 1942. Price \$2.00.

Dr. Dollard has written, out of psychoanalytic training and an experience of a decade at the Institute of Human Relations, Yale University, a straightforward, simple exposition of what the normal, intelligent person should be able to do in the way of helping himself to overcome fears. "Victory Over Fear" is rather an expanded essay than a text. Dr. Dollard's strategy for victory is "self-study," he does not use the pretentious word "analysis," and he sets forth the principles and possibilities of self-study in a way cal-

culated to inspire leisurely reading and rereading. It is reading which almost anybody, professional man or layman, might find profitable, but the work is primarily addressed to the thoughtful, nonprofessional man with a problem—and it should aid in the solving of many problems.

The difficulties of an analysis, even by the most experienced and most objective analyst, do not need to be stressed. Dr. Dollard does not offer self-study as a substitute for analytic work or as psychotherapy for serious conditions, although the dust-jacket of his volume bears an unfortunate implication in this direction; but he does offer it as an instrument by which the average normal person may overcome some of the fears attached to such an instinct as sex and to such concepts as insecurity, change and failure. The principles of Freudian, dynamic psychology are set forth simply and without technical terms; but the reader is warned that he cannot expect to study himself as Freud did; and the author is specific in noting that the psychotic or neurotic—although he does not use those words—cannot profit by the procedure. Dr. Dollard holds, however, that there is much in the attempt to understand the psychopathology of everyday life, in the attempt to understand the motivation of dreams, of everyday feelings of aggression and resentment, which can be of value to the individual who will study himself. With this limited and temperate point of view, there should be wide agreement. The author nowhere pretends that self-study can reveal much of the unconscious or bring about adjustments in personalities where disturbances are far below the conscious level.

The student of psychoanalysis should be particularly interested in Dr. Dollard's illustrative use of dreams. The "self-student" can hardly fail to gain knowledge of unconscious motivation and of his mental processes in general from the dreams which the author cites; and yet the mechanism of the dream-work is reported without the use of technical terms. The concluding chapters on today's fears, real and unreal, in particular on the fear of change, that the world after the war cannot be the old world we used to know, are well worth anybody's serious reading.

Other Publications Received

MENTAL DISORDERS, Statistical Summary, etc.; MENTAL DEFICIENCY, CONVULSIVE DISORDERS, Statistical Summaries, etc. Reports of the Division of Statistics, Department of Mental Health, The Commonwealth of Massachusetts. Neil A. Dayton, M. D., Director.

These reports, for the year 1940, are reprints of the material of greatest interest to public mental hospital administrative officers and statisticians outside the state of Massachusetts which appeared in the annual report

of the Massachusetts Department of Mental Health for that year. The reprints—paged according to the original report and paper-covered—give the statistics for mental disease, mental deficiency and epilepsy. Henry A. Tadgell, M. D., who has succeeded Dr. Dayton as Massachusetts statistical director, notes that “the statistical system as set up by my predecessors will continue to be flexible and will permit inclusion of analyses of other items.” Dr. Tadgell invites personal suggestions in this connection on points which readers of the report might consider to be of value to the psychiatrist or to the administrator.

RESEARCH IN PHYSICAL EDUCATION. By E. H. Cluver, M. D., et al. The South African Association for the Advancement of Science. Paper covers. Johannesburg. 1942.

This pamphlet is a collection of reprints from the “South African Journal of Science,” papers chiefly concerned with physical education and various medical aspects of athletics. Of particular interest to the neurologist, is a report by E. Jokl, M. D., and G. W. H. Schepers on “The Support Reaction and the Central Nervous Control of Progression.” This reflex, originally studied in decerebrate animals and later in animals after irritative or destructive lesions in the central nervous system, is reported in a human case in what the authors believe to be “the first recorded example of the support reaction of traumatic origin.”

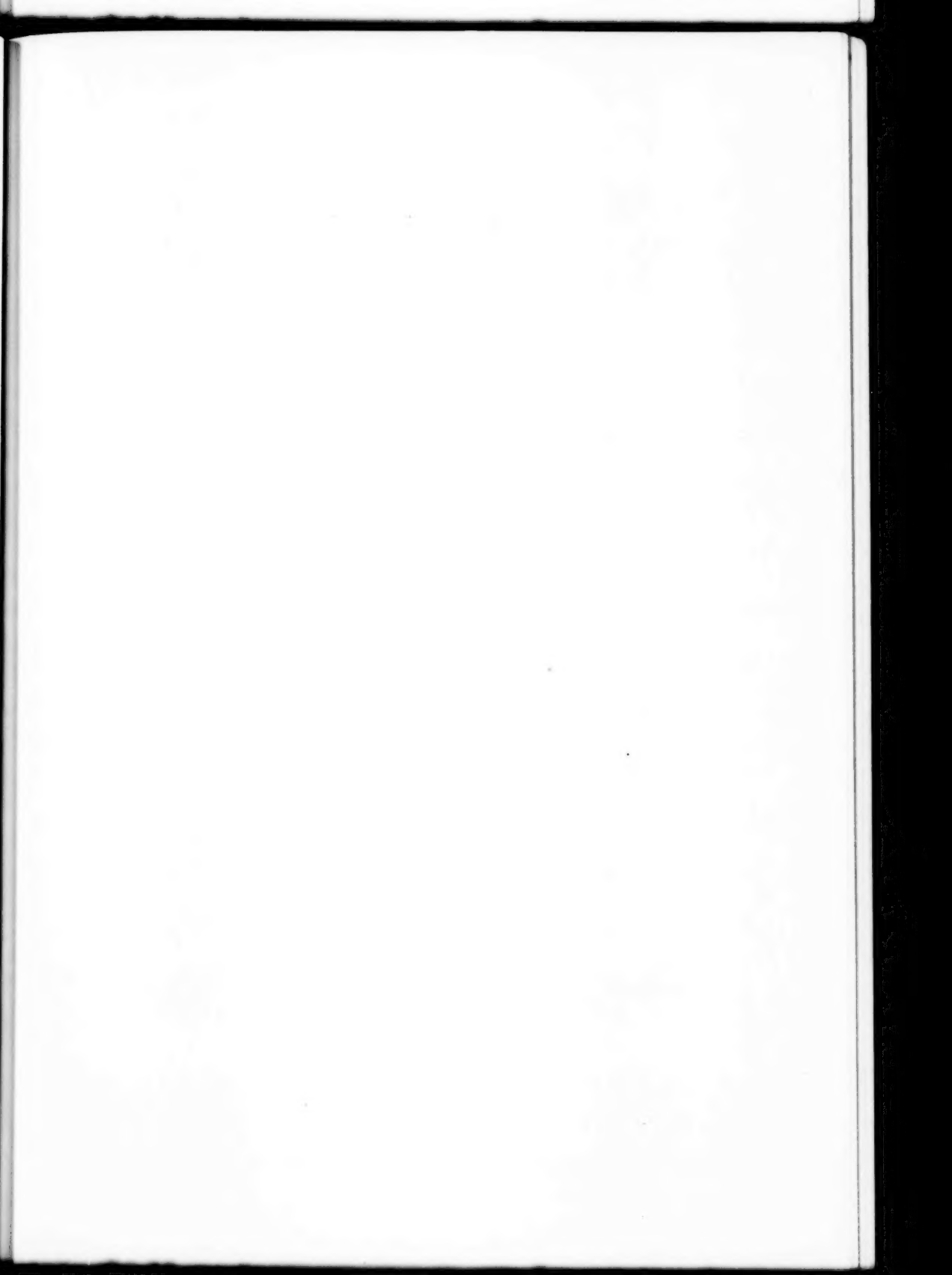
THE IMPORTANCE OF RESEARCH. By Don W. Gudakunst, M. D., 44 pages. Paper. National Foundation for Infantile Paralysis. New York. 1942.

This booklet, distributed by the National Foundation for Infantile Paralysis, is “designed to give the layman a clearer concept of the Foundation’s research activities in the field of infantile paralysis.” Its material first appeared in the “National Foundation News.” It is unusually clear, concise and comprehensive and can be recommended to the layman as conveying an excellent idea of medical research in general, as well as in the restricted field of poliomyelitis.

IT’S FUN TO MAKE THINGS. By Martha Parkhill and Dorothy Spaeth. 176 pages. Cloth. A. S. Barnes & Company. New York. 1941. Price \$2.00.

This is a note for occupational therapists and psychiatrists who keep occupational therapy prescriptions in mind. It is also for the one who believes that the best recipes to follow are kitchen-tested; for each of the projects presented was subjected to “kitchen-testing” by the authors at their Crater Club Day Camp at Essex, so that the faithful follower of the

easy to read and graphically presented directions for making things that are easy to do need not fear failure. Strictly from a nonprofessional angle, there is much to commend this book to anybody who likes to make things with his hands, but the searcher for therapeutic value will find a wealth of helpful suggestions. All steps are fully explained; tools and materials needed are listed; and costs are estimated, all this with an eye toward use of discarded things and economy of hard-to-get war materials. Last, the descriptions and brief histories prefacing each chapter are themselves 10 good reasons why this volume should be within easy reach of everybody from nine to 90 who believes "it's fun to make things."





SIDNEY W. BISGROVE, M. D.

SIDNEY W. BISGROVE, M. D.

Sidney W. Bisgrove, M. D., first assistant physician at Marcy State Hospital since 1931, became superintendent of Syracuse State School on November 1, 1942, to succeed Dr. Charles E. Rowe, who died on July 30. His appointment by Commissioner William J. Tiffany had been announced on October 13. He has been in the State hospital service for 22 years.

Sidney W. Bisgrove was born in Schenectady, May 8, 1890, the son of William F. and Ellen R. Bisgrove of Kingsbury, Somersetshire, England. He was graduated from Union College in that city in 1914 and obtained his medical degree from the College of Medicine at Albany in 1917. After intern- ing at Mercy Hospital, Schenectady, he served as an assistant to Dr. William P. Faust at the Emergency Hospital of the American Locomotive Company and as an assistant to Dr. E. MacD. Stanton, Schenectady surgeon, leaving this latter position to enter private practice in Cohoes.

In 1920, Dr. Bisgrove, who had become interested in psychiatry during two summer vacations spent working at Rochester State Hospital while a medical student, was appointed assistant physician at Utica State Hospital. Three years later, he became senior assistant physician; he was placed in charge of the reception service at Utica; and, in 1930, he was made clinical director at the Marcy division of Utica State Hospital, becoming first assistant physician of the new Marcy State Hospital in 1931.

Dr. Bisgrove was married on March 20, 1916, to Miss Caroline E. Gemmill of Schenectady. There are four children, Mrs. Robert H. Cross of Utica, Mrs. Donald W. Jones of Neptune, N. J., John Bisgrove, a student at Syracuse University Medical School and a second lieutenant in the medical reserve corps of the United States Army, and Ruth Bisgrove, a student at Syracuse University.

Dr. Bisgrove is a member of county and State medical societies and the American Psychiatric Association, and, while at Marcy, was a member of the Yahnundasis Golf Club and the Torch Club of Utica. He has written scientific papers for THE PSYCHIATRIC QUARTERLY and has done much speaking on psychiatric and mental hygiene subjects. In 1930, he assisted in the reclassification of prisoners at Auburn under direction of Dr. Branham. He lists his personal hobbies as golf and a reforestation project at his summer home at Woodgate.

JAMES P. KELLEHER, M. D.

The appointment of James P. Kelleher, M. D., first assistant physician at Hudson River State Hospital since 1934 and acting medical inspector since June, 1942, as superintendent of Rome State School was announced on October 30, 1942, by Commissioner Tiffany. With the appointment effective November 1, 1942, he succeeded Dr. Charles Bernstein who died the preceding June 13.

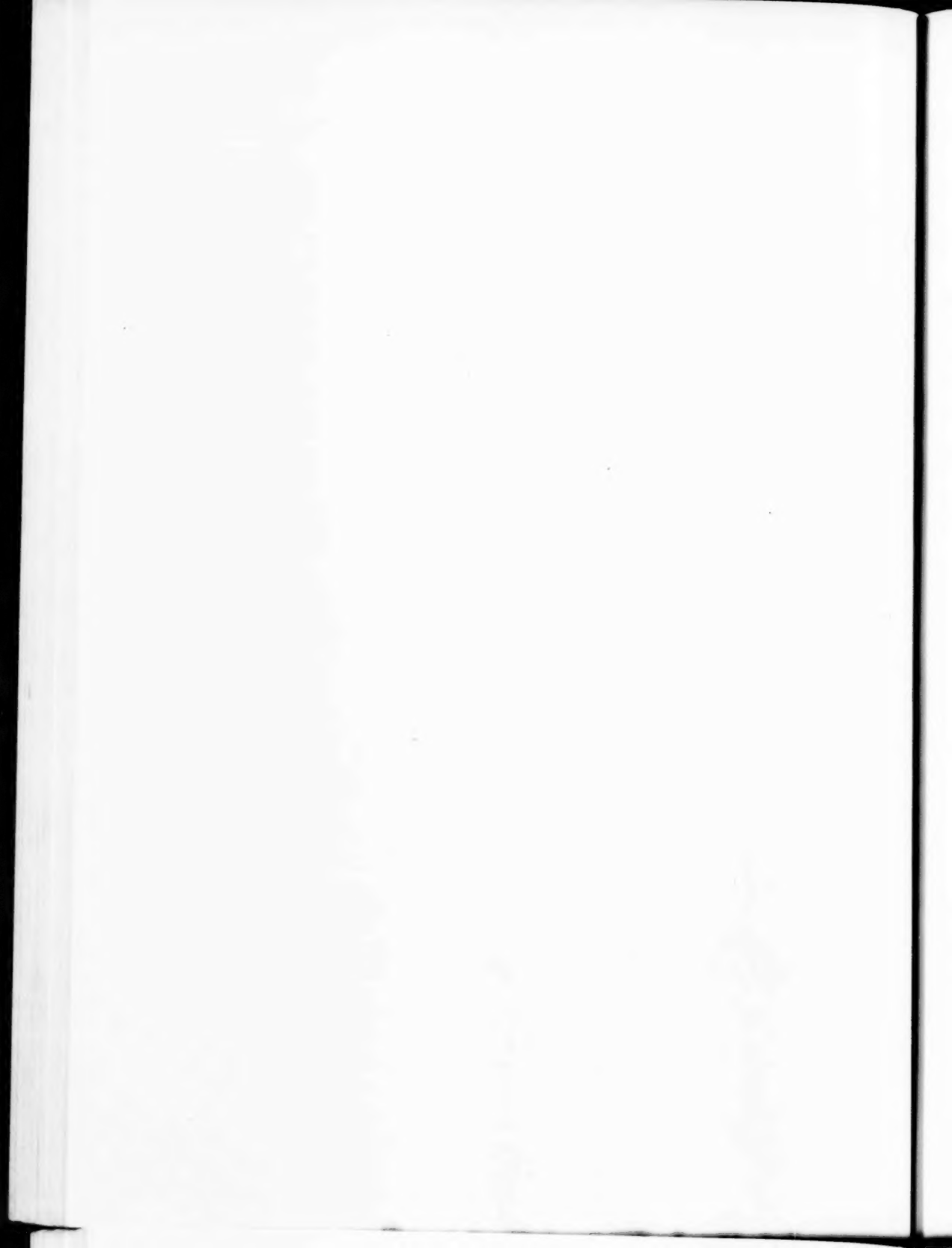
James P. Kelleher was born in Brockton, Mass., in December, 1886. He was graduated from Tufts Medical School in Boston in 1910 and entered the New York State service as an interne at Kings Park State Hospital the following summer. He transferred to Manhattan State Hospital in 1911 and, while serving there, was promoted to assistant physician in 1912 and senior assistant physician in 1916. He became clinical director at Hudson River State Hospital in 1927 and was promoted to first assistant physician in 1934.

Dr. Kelleher, was married to Annabelle M. Leyden in 1910, and they have six children. Three daughters, Marie, Agnes and Dorothy Kelleher, are employees in the State hospital system; and a fourth, Edythe Ann, is living at home. A son, Sergt. James T. Kelleher, left college to enlist in the army in 1940 and is now in training as an air cadet; and a second son, Jack Kelleher, is a high school senior studying aeronautics with a view to enlistment. Mrs. Kelleher was active in parent-teacher association work in Poughkeepsie and other community endeavors. The officers of Hudson River State Hospital presented a silver service to the Kellehers and the employees a war bond, on their leaving the hospital.

Dr. Kelleher is a member of county and State medical societies, of the American Psychiatric Association and of the Dutchess County Psychiatric Society; he has contributed to various medical and scientific journals and has done a good deal of speaking before medical and community organizations. He was instructor of psychiatry for some years at the New York School of Social Work. He also has served as instructor in the department of psychology and in the College of Physicians and Surgeons, Columbia University, as well as in the Vanderbilt Clinic.



JAMES P. KELLEHER, M. D.



NEWS AND COMMENT

UTICA STATE HOSPITAL 100 YEARS OLD

Utica State Hospital, "mother of hospitals" and the oldest mental institution maintained by New York State, will observe its 100th anniversary on January 16, 1943, with appropriate ceremonies at which leaders in American psychiatry and allied fields will participate. The hospital was opened as the New York Lunatic Asylum on January 16, 1843, under the superintendency of the famous Dr. Amariah Brigham.

Speakers at the morning and afternoon sessions of the anniversary observance will include: William J. Tiffany, M. D., Commissioner of the New York State Department of Mental Hygiene; Arthur H. Ruggles, M. D., president of the American Psychiatric Association; Willis E. Merriman, M. D., superintendent of Utica State Hospital; Richard H. Hutchings, M. D., former superintendent of Utica State Hospital, and former president of the American Psychiatric Association; Samuel W. Hamilton, M. D., mental hospital advisor of the United States Public Health Service; and Homer Folks, secretary of the State Charities Aid Association and chairman of New York State's Temporary Commission on State Hospital Problems.

The board of visitors of Utica State Hospital, the Oneida County Mental Hygiene Committee and the Utica Council of Social Agencies have cooperated in arranging the program. A short history of the hospital has been compiled as a booklet for the occasion; and a limited number of copies may be available later to those interested. Besides the program of exercises, an exhibit of the work of the hospital will be open to visitors.

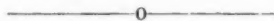
DR. MIRA GIVES SALMON LECTURES

Dr. Emilio Mira, professor of psychiatry at the University of Buenos Aires, formerly director of neuropsychiatry for the Loyalist forces in the Spanish Civil War, and former holder of three full professorships at the University of Barcelona, delivered the 1942 Salmon Lectures, the tenth year of the annual lecture series, in eight American and Canadian cities during November. On the precedent of the ninth Salmon Lectures the previous year, in which Dr. R. D. Gillespie followed his New York addresses by appearances in six other cities, Dr. Mira spoke in Boston, New Orleans, San Antonio, Galveston, Houston, Toronto and Philadelphia, as well as in New York where he lectured on November 6, 13 and 20.

His subjects were "The Psychopathology of Fear and Anger Reactions in War Time," "Duties of a Psychiatrist at War" and "New Techniques of Control and Detection of the 'Fighting Power' in the Individual and the Group." The series of Mira lectures was arranged by The Salmon Committee on Psychiatry and Mental Hygiene of the New York Academy of Medicine. Dr. C. Charles Burlingame is chairman. The New York addresses were given at the Academy of Medicine building.

Dr. Mira drew largely on his personal experiences in the Spanish conflict and later in other European countries in World War II for the conclusions presented in his lectures. Among other points made, he explained the growing harshness and cruelty of the German military toward civilians as "displaced anger" caused by the thwarting of the Nazi army in attaining its military objectives. He noted that "there can be good combat work without either anger or eagerness . . . Modern warfare is best fought by men who fight with minds unclouded by ferocity." He said that mental breakdowns under combat conditions had been infrequent in Loyalist Spain early in the war, but that the impact of the conflict made itself felt mentally when the people saw that outside help was not coming and "lost faith in the future."

Dr. Mira made the observation that some mild schizophrenics react well under the stress of war and battle, because there are stimuli to make them forget their inner conflicts and behave like normal people, while normal people, on the contrary, may become deeply depressed. His third lecture was devoted in part to the discussion of a device designed by himself to test fighting power and other dominant characteristics. Besides his formal lectures, Dr. Mira conducted a series of conferences while in this country with officers of the War and Navy Departments, army air force officers and naval aeronautics psychiatrists and officers of the army morale branch.



GROUP ON MENTAL DEFICIENCY MEETS

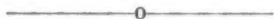
A regional meeting of the northeastern section of the American Association on Mental Deficiency was conducted at the Southbury, Conn., Training School on October 17, 1942. The morning was devoted to inspecting the institution; and in the afternoon, there was a talk by Neil A. Dayton, M. D., illustrated with colored motion pictures, and the presentation of several scientific papers. Dr. N. S. Kupelian, superintendent of Pownal State School at Pownal, Maine, is chairman of the regional section, and Ernest N. Roselle, superintendent of the Southbury school, was host at the meeting.

TIMOTHY E. MCGARR IS DEAD

Timothy E. McGarr, veteran of more than 50 years in the civil State hospital service of New York State and former secretary of the State Hospital Commission, died on December 5, 1942, at the age of 86 after an illness of several months.

Mr. McGarr had a long and distinguished career in the mental hospital service which he entered as a very young man. Born in Auburn, on April 10, 1856, he obtained his first job with the Associated Press after a brilliant school record in modern languages and stenography, and later became secretary to Roscoe Conkling. In 1878, his mental hospital experience began when he became secretary to Superintendent John P. Gray at the Utica State Lunatic Asylum, a position he held until 1889 when he was named secretary to the State's first Commission in Lunacy. In 1916, because of impaired health, he asked relief from some of his duties and became executive officer of the commission's joint purchasing board, and later the commission's representative on the central supplies committee. He became treasurer of the institutions under the commission's jurisdiction in 1921 and retained the position after the organization of the Department of Mental Hygiene in 1927 and until his retirement in 1931. For some years, he was active in the business management of the STATE HOSPITAL QUARTERLY and of THE PSYCHIATRIC QUARTERLY which succeeded it; and he continued his work for THE QUARTERLY and THE PSYCHIATRIC QUARTERLY SUPPLEMENT for some time after his retirement. He was a contributor of non-medical articles to these publications and was a translator of foreign psychiatric papers.

Mr. McGarr was officially honored by Commissioner Frederick W. Parsons and his associates on his fiftieth anniversary of entrance into the State hospital service. A tribute to his memory was read at the December, 1942, Quarterly Conference of the New York State Department of Mental Hygiene by Dr. Willis E. Merriman, superintendent of Utica State Hospital. It is both a more complete biography of Mr. McGarr than is given here and an evaluation of the career of this faithful servant of the State. Readers are referred to the forthcoming issue of THE PSYCHIATRIC QUARTERLY SUPPLEMENT where Dr. Merriman's tribute will be published in full.



RED CROSS SCHOLARSHIP AID ANNOUNCED

A program of scholarship aid for medical and psychiatric social workers has been announced by the American Red Cross under which qualified students will receive tuition and allowances for an academic year of training at an approved school in exchange for an agreement to serve with the Red

Cross for two years in the United States, with an option of volunteering for service abroad. Persons interested in the North Atlantic area may obtain further information from the Red Cross at 300 Fourth Avenue, New York, N. Y.

MENTAL HYGIENE NATIONAL COMMITTEE MEETS

The National Committee for Mental Hygiene had its annual luncheon and meeting in New York City, November 12, 1942. Speakers included Dr. Samuel W. Hamilton of the United States Public Health Service, Dr. George S. Stevenson, medical director of the committee, Dr. Marion Kenworthy, Dr. James S. Plant, Robert E. Bondy and Robert M. Heininger. Among other points made by the speakers, Dr. Kenworthy criticized the selective service system for failure to provide more adequate psychiatric examinations, Dr. Hamilton noted that archaic commitment and reception procedures still existed in a number of states, and Dr. Stevenson stressed among the war aims of the national committee the early detection of psychiatric and neurologic cases. Dr. Adolf Meyer presided.

HUGO STAUB, CRIMINAL PSYCHOLOGY EXPERT, DIES

Hugo Staub, internationally-known authority on criminal psychology, exile from Nazi-occupied Europe, and writer on psychoanalytic subjects, died in New York City on October 29, 1942, after a brief illness. He would have been 57 years old on November 18.

Born in Germany, a graduate in law, close student of criminology and psychiatry, he had been government counsel in the Supreme Court of Prussia, psychological expert in the criminal courts of northern Germany and lecturer on criminal psychology and sociology at the Berlin Institute for Psychoanalysis before going to Paris in 1933 for research in France and England. In London, he worked with juvenile delinquents at the Institute for the Scientific Treatment of Juvenile Delinquency and was a member of the British Psychoanalytic Association and the British Society for Medical Psychology. When France fell, he was serving as an officer of the French army, was rescued by the International Red Cross at Vichy and escorted to the Spanish border, from which point he made his way to America.

Hugo Staub was widely known as an authoritative writer on his specialized subject and was coauthor with Dr. Franz Alexander of "The Criminal, the Judge and the Public," besides having written many papers for scientific publications. At the time of his death, he was associated with the Community Service Society and with the Jewish Board of Guardians in

New York City and was attached to the staff of the Hawthorne-Cedar Knolls School for Delinquent Boys, conducted by the latter organization. He leaves his widow, two sons and two daughters.

NEW COURSE IN SPEECH AND HEARING DISORDERS

The Association for the Advancement of Psychotherapy announces a new course on the management of speech, voice and hearing disorders in wartime to be given in New York City by Wladimir G. Eliasberg, M. D., and Augusta V. Jellinek, Ph.D., commencing on January 18. Pathology, correction and rehabilitation will be studied. Further information may be obtained from Dr. Eliasberg, 420 West End Avenue, New York, N. Y.

NEW MATERIAL ON CIVILIAN MENTAL HEALTH AVAILABLE

The Committee on War Psychiatry of the American Psychiatric Association, Harry A. Steekel, M. D., superintendent of the Syracuse Psychopathic Hospital, chairman, has brought out a new publication dealing with the steps taken in this country to preserve and improve civilian mental health. Procedures adopted for State-wide areas, for large cities and metropolitan districts, and for small towns and rural areas are reported in the publication, which may be obtained without cost on application. Copies may be obtained from D. Ewen Cameron, M. D., chairman of the subcommittee which compiled the information, at Albany Hospital, Albany, from Dr. T. Raphael, University of Michigan, Ann Arbor, Mich., and Dr. F. H. Sleeper, 100 Nashua Street, Boston. Those wishing more detailed information may obtain it from Dr. Raphael for data on rural areas, from Dr. Sleeper in regard to State-wide areas, and from Dr. Cameron for large cities and metropolitan districts.

PSYCHIATRIC NURSING AFFILIATION ANNOUNCED

A formal affiliation between the department of nursing, College of Physicians and Surgeons, Columbia University, and the Neuropsychiatric Institute of the Hartford Retreat, was announced on October 30, 1942, by Dr. C. Charles Burlingame, psychiatrist in chief of the retreat, and Miss Margaret E. Conrad, head of the Columbia nursing department. The first students began training at the retreat in December. Only college graduates among the nurses are eligible for the work, which is of university grade and includes instruction in all branches of psychiatry, psychiatric nursing and related subjects. The College of Physicians and Surgeons and the Hartford

Retreat already had an informal arrangement for the training of candidates for the degree of doctor of medical science in psychiatry and neurology at the retreat.

DR. EMIL ALTMAN DIES

Emil Altman, M. D., widely known as a neurologist and chief medical examiner for 17 years of the Board of Education of New York City, died in that city after a brief illness on September 12, 1942. He was 69 years old.

Dr. Altman had been known for many years for his fights to improve the teaching personnel of the city; and, in 1934, he was the center of a controversy when he asserted that some 1,500 of New York's 36,000 teachers were emotionally unstable or mentally ill and was attacked by teachers' groups and others on the ground that he had called them "insane." Dr. Altman, born in Hungary, was a graduate of the College of Physicians and Surgeons, Columbia University, in 1895, and he later studied neurology and psychiatry abroad. His interest in the schools dated from his medical student days when he taught in night school. He was the author of "Neurology and Psychiatry" and "Brain Atrophies of Later Life." He had served as a medical officer in the United States Army in the first World War and was a colonel in the medical reserve corps at the time of his death but had not been called to active service. He was unmarried.

NEW PENNSYLVANIA HOSPITAL IS OPENED

A new and important public mental hospital and research institution, the Western State Psychiatric Hospital at Pittsburgh, Penn., received its first patients in November, 1942, by transfer from other institutions of cases presenting features of research or educational value. The institution had been formally dedicated in September. Educational facilities of the new hospital are available for the University of Pittsburgh School of Medicine. The project had been planned since 1924.

DR. GREGORY LEAVES FUND TO N. Y. U.

A bequest of \$40,000 was left by Dr. Menas S. Gregory to the New York University College of Medicine, half to establish an annual lectureship and half to be used toward the endowment of a professorship in the department of psychiatry, it became known when the provisions of the psychiatrist's will were made public. He had been professor of psychiatry at that medical school for many years.

DR. HUBERT WORK IS DEAD AT 82

Dr. Hubert Work, once a leading psychiatrist, and a prominent figure in American politics and public life two decades ago, died in Denver, Colo., on December 14, 1942, at the age of 82. Born in Pennsylvania and a graduate of medicine of the University of Pennsylvania in 1885, Dr. Work entered practice in Colorado that same year. He specialized in psychiatry, and 11 years later, founded a hospital for mental and nervous diseases. He was president of the American Medico-Psychological Association, now the American Psychiatric Association, in 1910, and later was president of the American Medical Association. He was active in political as well as professional circles; and by this time, he had been delegate-at-large to the Republican national convention. In 1912 he was member from Colorado of the Republican National Committee.

The first World War, in which Dr. Work served in the army medical corps, with duties concerned with medical aspects of the draft, put an end to his professional medical career, although he was in attendance on President Harding during the latter's brief last illness. He became increasingly active in public affairs, however, and served as postmaster-general of the United States under Harding and as secretary of the interior under Harding and later under President Coolidge. He was chairman of the Republican National Committee in 1928 and 1929.

Dr. Work is survived by a son and daughter of his first marriage and by his second wife, who was Mrs. Ethel Reed Gano of Denver.

MAJOR HANLON IS NEW NAPANOCH HEAD

Major Thomas J. Hanlon became head of the New York State Institution for Male Defective Delinquents at Napanoch on September 15, 1942, succeeding Dr. Raymond C. Kieb who had retired a short time before his appointment. He had been assistant superintendent of Elmira Reformatory since 1934; and the appointment was made by Commissioner John A. Lyons of the Department of Correction, which has jurisdiction of the Napanoch institution. Major Hanlon headed the civil service list of those eligible for the post.

QUARTERLY CONFERENCE HELD ON DECEMBER 19, 1942

The December, 1942, Quarterly Conference of superintendents and visitors of the institutions of the New York State Department of Mental Hygiene with the Commissioner was conducted at the New York State Psychiatric Institute and Hospital, New York, on December 19. Nolan

D. C. Lewis, M. D., director of the Institute, presented a paper reviewing the research work done there during the year; and Franz Kallmann, M. D., formerly of the Institute and now at Manhattan State Hospital, presented another paper dealing with his study of twins, "Genetic Mechanisms Underlying Resistance to Tuberculosis." Col. Homer Folks reported on the work of the New York Temporary Commission on State Hospital Problems, of which he is chairman. Commissioner Tiffany presided. Two memorial tributes were given, one to Mrs. Eleanor Clarke Slagle, former director of occupational therapy for the Department, by Dr. Philip Smith; and one to Timothy E. McGarr, former Department secretary and treasurer, by Dr. Willis E. Merriman.

The preceding Quarterly Conference, that of September, was largely devoted to problems created by extension of the Feld-Hamilton Law, governing employment conditions, to the Department of Mental Hygiene. More complete accounts of both conferences and the minutes will appear in the January, 1943, issue of THE PSYCHIATRIC QUARTERLY SUPPLEMENT.

"THE NERVOUS CHILD" IS ENLARGED AND IMPROVED

The quarterly journal, "The Nervous Child," edited by Ernest Harms, M. D., has started its second year in an enlarged and greatly improved form. The publication's editorial board has been increased by the addition of workers from special fields not previously covered or not fully covered; and the publisher is now the firm of Grune & Stratton, medical publishing house of New York. Dr. Harms reports that the arrangements for the first year of issue were highly unsatisfactory, and the first issue of the new volume, that of October, 1942, shows great improvement. The journal is "offered as a clearing-house for all organizations and institutions working in the field of mental hygiene and guidance of the child."

DR. WILLIAM N. TRADER DIES AT CRAIG COLONY

William N. Trader, M. D., first assistant physician at Craig Colony for Epileptics at Sonyea, died at his home there on October 11, 1942, at the age of 65.

Dr. Trader, a native of Virginia, was graduated from Richmond College, Virginia, in 1900 and from the Medical School of the University of Virginia in 1904. He entered the New York State service at Craig Colony in 1906 as an interne and was promoted through all the grades there until he was named first assistant physician. He was a member of county and national medical societies and the American Psychiatric Association. Five children survive him.

ARTHUR M. PHILLIPS, M. D., DIES

Dr. Arthur M. Phillips, first assistant physician at Manhattan State Hospital for the last 12 years, died on December 16, 1942, at the New York Hospital at the age of 64. Born in Gorham, N. Y., he was a graduate of Phillips Andover Academy, Harvard College and the Medical School of the University of Buffalo, from which he received his M. D. degree in 1902. He entered the State hospital service at Utica State Hospital in the same year, transferred to Manhattan State Hospital a year later and had remained there ever since. He had taught abnormal psychology at Columbia University and was instructor in psychiatry at Cornell University Medical School at the time of his death. He leaves a widow, the former Linnie Whitaker, and twin sons, Arthur and Roswell Phillips.

DR. ELIZABETH MALLISON, PSYCHIATRIST, IS DEAD AT 77

Dr. Elizabeth Carr Mallison, one of the country's early women psychiatrists, died in McKeesport, Penn., on October 19, 1942, at the age of 77. Born in New York State in 1865, Elizabeth Mallison received her medical degree from the Women's Medical College of Pennsylvania at the age of 21 and, after private practice in California and Minnesota, returned to Pennsylvania where she was for some years a staff member of the hospital for mental diseases at Dixmont. She became a consultant on mental and nervous diseases in 1893 at the McKeesport Hospital, one of the early general hospitals to recognize the specialty, and she had been a staff member of that hospital since 1914. Besides specializing in psychiatry, she was a specialist in gynecology, and she did not confine her practice to her specialties, but was known as her community's first woman "horse and buggy doctor." She was a fellow of the American Medical Association.